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Fantasy AND Science Fiction

JUNE 40¢

MERCURY PUBLICATION

NO TRUCE WITH KINGS

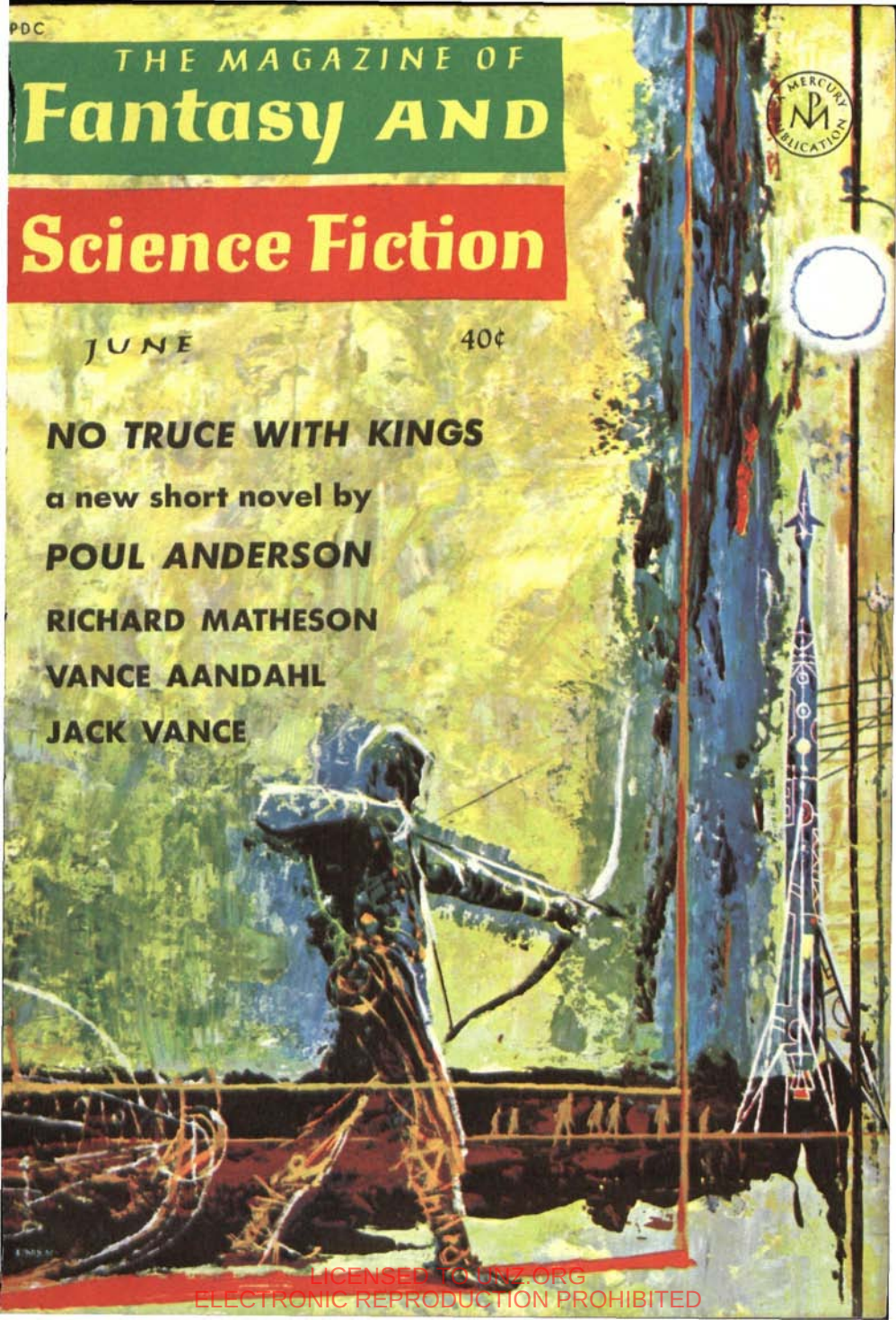
a new short novel by

POUL ANDERSON

RICHARD MATHESON

VANCE AANDAHL

JACK VANCE



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The Magazine of Fantasy and Science Fiction

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Cover by Emsh (illustrating "No Truce With Kings")

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In this issue . . .

. . . . is **POUL ANDERSON**'s complete short novel, illustrated by Ed Emsh's vivid cover, in which a future—and fragmented—America fights for its spiritual as well as its physical integrity. **MARION ZIMMER BRADLEY** and collaborator **JOHN JAY WELLS** take a daring and unusual theme, treat it with logic and dignity. **VANCE AANDAHL** shows that the fury of a man scorned can equal that of any woman. **RICHARD MATHESON** engages in a fantastic *reductio ad absurdem*. Here for the first time are: **SHIN'ICHI HOSHI**, Japan's leading SF author, with a wry tale of a robot B-girl; **JACK** (*The Dragon Masters*) **VANCE**, looking beyond the old, old magics of black and white; and **CON PEDERSON**—the missing man—whose story of a pair of planet-plunderers and their comeuppance makes us wish he weren't.

Coming next month . . .

. . . is part one of **ROBERT A. HEINLEIN**'s latest novel, GLORY ROAD. Suppose you were a young, vigorous veteran of a not-quite-war, with no very close ties and no immediate plans . . . suppose you picked up a newspaper and saw an ad which seemed tailor-made for you . . . would you let the fact that it said *HERO WANTED* dissuade you from applying? If so, you'd be missing the greatest Adventure in the Twenty Universes. GLORY ROAD has everything which makes Robert A. Heinlein pre-eminent in the field, and yet it is unlike any other Heinlein book we have ever read. As an *hors d'oeuvre* to the main course, and as proof that we are Never Afraid To Experiment, we offer next month (for the very first time) a Letters Column. We may never offer it again. It all depends. See you aboard.

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Introduction to Poul Anderson's NO TRUCE WITH KINGS

Poul Anderson, once we had thrown one of our famous hammerlocks onto him and threatened to snap his slender frame like a cheese-straw unless he divulged some personal details for this space, replied and said: "Age, 36; one wife, one child, one house, one car, one third of a largish houseboat (the other thirds belong to Jack Vance and Frank Herbert, or will when we finish building it [in San Francisco Bay] . . .) Trained as a physicist but drifted into writing. Like to read, talk, drink beer, sail, listen to Bach, build things, hike, travel—all in all, a pretty bourgeois type, lucky enough not to have to put up with the drawbacks of bourgeoisie such as neckties, commuting, and office politics." The author of (among many other things) THREE HEARTS AND THREE LIONS (F&SF, Sept.-Oct., 1953 [Doubleday, 1961]) and PROGRESS (F&SF, Jan. 1962) also translates Skaldic verse from the Old Norse, is with his brother co-founder of the Danish Imperialist Party of the United States (membership: two), Karen's husband, Astrid's father; and a keen student of medieval, modern, and—as here witness—future history. The America of this short novel is in many ways reminiscent of the Japan of the Early Meji Restoration—the rifle sharing honors with the bow, feudal lords and central government in uncertain balance, alien powers trying to impose alien patterns. But title and principle are Western, rather than Eastern. All we have of freedom, all we use or know— / This our fathers bought for us long and long ago," *wrote Kipling.* Ancient Right unnoticed as the breath we draw— / Leave to live by no man's leave, underneath the Law— // Lance and torch and tumult, steel and greygoose wing, / Wrenched it, inch and ell and all, slowly from the King. *The King, the Leader, the Party, the Revolution . . . Tyranny has many names, Freedom needs but one.*

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NO TRUCE WITH KINGS

by Poul Anderson

Ancient and Unteachable, abide—abide the Trumpets!
Once again the Trumpets, for the shuddering ground-swell brings
Clamour over ocean of the harsh, pursuing Trumpets—
Trumpets of the Vanguard that have sworn no truce with Kings!—RUDYARD KIPLING

"SONG, CHARLIE! GIVE'S A SONG!"

"Yay, Charlie!"

The whole mess was drunk, and the junior officers at the far end of the table were only somewhat noisier than their seniors near the colonel. Rugs and hangings could not much muffle the racket, shouts, stamping boots, thump of fists on oak and clash of cups raised aloft, that rang from wall to stony wall. High up among shadows that hid the rafters they hung from, the regimental banners stirred in a draft, as if to join the chaos. Below, the light of bracketed lanterns and bellowing fireplace winked on trophies and weapons.

Autumn comes early on Echo Summit, and it was storming outside, wind-hoot past the watchtowers and rain-rush in the courtyards, an undertone that walked through the buildings and down all corridors, as if the story were true that the unit's dead came out of the cemetery each September Nineteenth night and tried to join the celebration but had forgotten how. No one let it bother him, here or in the enlisted barracks, except maybe the hex major. The Third Division, the Catamounts, was known as the most riotous gang in the Army of the Pacific States of America, and of its regiments the Rolling Stones who held Fort Nakamura were the wildest.

"Go on, boy! Lead off. You've got the closest thing to a voice in the whole goddamn Sierra," Colonel Mackenzie called. He loosened the collar of his black dress

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tunic and lounged back, legs asprawl, pipe in one hand and beaker of whisky in the other: a thickset man with blue wrinkle-meshed eyes in a battered face, his cropped hair turned gray but his mustache still arrogantly red.

"Charlie is my darlin', my darlin', my darlin'," sang Captain Hulse. He stopped as the noise abated a little. Young Lieutenant Amadeo got up, grinned, and launched into one they well knew.

"I am a Catamountain, I guard a border pass.
And every time I venture out, the cold will freeze m —

"Colonel, sir. Begging your pardon."

Mackenzie twisted around and looked into the face of Sergeant Irwin. The man's expression shocked him. "Yes?"

"I am a bloody hero, a decorated vet:
The Order of the Purple Shaft, with pineapple clusters yet!"

"Message just come in, sir. Major Speyer asks to see you right away."

Speyer, who didn't like being drunk, had volunteered for duty tonight; otherwise men drew lots for it on a holiday. Remembering the last word from San Francisco, Mackenzie grew chill.

The mess bawled forth the chorus, not noticing when the colonel knocked out his pipe and rose.

"The guns go boom! Hey, tiddley boom!
The rockets vroom, the arrows zoom.
From slug to slug is damn small room.
Get me out of here and back to the good old womb!
(Hey, doodle dee day!)"

All right-thinking Catamounts maintained that they could operate better with the booze sloshing up to their eardrums than any other outfit cold sober. Mackenzie ignored the tingle in his veins; forgot it. He walked a straight line to the door, automatically taking his sidearm off the rack as he passed by. The song pursued him into the hall.

"For maggots in the rations, we hardly ever lack.
You bite into a sandwich and the sandwich bites right back.
The coffee is the finest grade of Sacramento mud.
The ketchup's good in combat, though, for simulating blood.
(Cho-orus!)
The drums go bump! Ah-tumpty-tump!
The bugles make like Gabri'l's trump —'

Lanterns were far apart in the

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passage. Portraits of former commanders watched the colonel and the sergeant from eyes that were hidden in grotesque darknesses. Footfalls clattered too loudly here.

"I've got an arrow in my rump.
Right about and rearward, heroes, on the jump!
(Hey, doodle dee day!)"

Mackenzie went between a pair of fieldpieces flanking a stairway —they had been captured at Rock Springs during the Wyoming War, a generation ago—and upward. There was more distance between places in this keep than his legs liked at their present age. But it was old, had been added to decade by decade; and it needed to be massive, chiseled and mortared from Sierra granite, for it guarded a key to the nation. More than one army had broken against its revetments, before the Nevada marches were pacified, and more young men than Mackenzie wished to think about had gone from this base to die among angry strangers.

But she's never been attacked from the west. God, or whatever you are, you can spare her that, can't you?

The command office was lonesome at this hour. The room where Sergeant Irwin had his desk lay so silent: no clerks pushing pens, no messengers going in or out, no wives making a splash of color with their dresses as they waited to see the colonel about some problem down in the Village. When he opened the door to the inner room, though, Mackenzie heard the wind shriek around the angle of the wall. Rain slashed at the black windowpane and ran down in streams which the lanterns turned molten.

"Here the colonel is, sir," Irwin said in an uneven voice. He gulped and closed the door behind Mackenzie.

Speyer stood by the commander's desk. It was a beat-up old object with little upon it: an inkwell, a letterbasket, an interphone, a photograph of Nora, faded in these dozen years since her death. The major was a tall and gaunt man, hook-nosed, going bald on top. His uniform always looked unpressed, somehow. But he had the sharpest brain in the Cats, Mackenzie thought; and Christ, how could any man read as many books as Phil did! Officially he was the adjutant, in practice the chief advisor.

"Well?" Mackenzie said. The alcohol did not seem to numb him, rather make him too acutely aware of things: how the lanterns smelled hot (when would they get a big enough generator to run electric lights?), and the floor was hard under his feet, and a crack went through the plaster of the north wall, and the stove wasn't driving out much of the

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chill. He forced bravado, stuck thumbs in belt and rocked back on his heels. "Well, Phil, what's wrong now?"

"Wire from Frisco," Speyer said. He had been folding and unfolding a piece of paper, which he handed over.

"Huh? Why not a radio call?"

"Telegram's less likely to be intercepted. This one's in code, at that. Irwin decoded it for me."

"What the hell kind of nonsense is this?"

"Have a look, Jimbo, and you'll find out. It's for you, anyway. Direct from GHQ."

Mackenzie focused on Irwin's scrawl. The usual formalities of an order; then:

You are hereby notified that the Pacific States Senate has passed a bill of impeachment against Owen Brodsky, formerly Judge of the Pacific States of America, and deprived him of office. As of 2000 hours this date, former Vice Humphrey Fallon is Judge of the PSA in accordance with the Law of Succession. The existence of dissident elements constituting a public danger has made it necessary for Judge Fallon to put the entire nation under martial law, effective at 2100 hours this date. You are therefore issued the following instructions:

1. The above intelligence is to be held strictly confidential until an official proclamation is made. No person who has received knowledge in the course of transmitting this message shall divulge same to any other person whatsoever. Violators of this section and anyone thereby receiving information shall be placed immediately in solitary confinement to await courtmartial.

2. You will sequestrate all arms and ammunition except for ten percent of available stock, and keep same under heavy guard.

3. You will keep all men in the Fort Nakamura area until you are relieved. Your relief is Colonel Simon Hollis, who will start from San Francisco tomorrow morning with one battalion. They are expected to arrive at Fort Nakamura in five days, at which time you will surrender your command to him. Colonel Hollis will designate those officers and enlisted men who are to be replaced by members of his battalion, which will be integrated into the regiment. You will lead the men replaced back to San Francisco and report to Brigadier General Mendoza at New Fort Baker. To avoid provocations, these men will be disarmed except for officers' sidearms.

4. For your private information, Captain Thomas Danielis has been appointed senior aide to Colonel Hollis.

5. You are again reminded that the Pacific States of America are under martial law because of a national emergency. Complete

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loyalty to the legal government is required. Any mutinous talk must be severely punished. Anyone giving aid or comfort to the Brodsky faction is guilty of treason and will be dealt with accordingly.

GERALD O'DONNELL,
GEN. APSA, CINC

Thunder went off in the mountains like artillery. It was a while before Mackenzie stirred, and then merely to lay the paper on his desk. He could only summon feeling slowly, up into a hollowness that filled his skin.

"They dared," Speyer said without tone. "They really did."

"Huh?" Mackenzie swiveled eyes around to the major's face. Speyer didn't meet that stare. He was concentrating his own gaze on his hands, which were now rolling a cigaret. But the words jerked from him, harsh and quick:

"I can guess what happened. The warhawks have been hollering for impeachment ever since Brodsky compromised the border dispute with West Canada. And Fallon, yeah, he's got ambitions of his own. But his partisans are a minority and he knows it. Electing him Vice helped soothe the warhawks some, but he'd never make Judge the regular way, because Brodsky isn't going to die of old age before Fallon does, and anyhow more than fifty percent of the Senate are sober, satisfied bossmen who don't agree that the PSA has a divine mandate to reunify the continent. I don't see how an impeachment could get through an honestly convened Senate. More likely they'd vote out Fallon."

"But a Senate had been called," Mackenzie said. The words sounded to him like someone else talking. "The newscasts told us."

"Sure. Called for yesterday 'to debate ratification of the treaty with West Canada.' But the bossmen are scatteered up and down the country, each at his own Station. They have to *get* to San Francisco. A couple of arranged delays—hell, if a bridge just happened to be blown on the Boise railroad, a round dozen of Brodsky's staunchest supporters wouldn't arrive on time—so the Senate has a quorum, all right, but every one of Fallon's supporters are there, and so many of the rest are missing that the warhawks have a clear majority. Then they meet on a holiday, when no cityman is paying attention. Presto, impeachment and a new Judge!" Speyer finished his cigaret and stuck it between his lips while he fumbled for a match.

"You sure?" Mackenzie mumbled. He thought dimly that this moment was like one time he'd visited Puget City and been invited for a sail on the Guardian's yacht, and a fog had closed in. Everything was cold and blind, with nothing you could catch in your hands.

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"Of course I'm not sure!" Speyer snarled. "Nobody will be sure till it's too late." The matchbox shook in his grasp.

"They, uh, they got a new Cinc too, I noticed."

"Uh-huh. They'd want to replace everybody they can't trust, as fast as possible, and de Barros was a Brodsky appointee." The match flared with a hellish *scrit.* Speyer inhaled till his cheeks collapsed. "You and me included, naturally. The regiment reduced to minimum armament so that nobody will get ideas about resistance when the new colonel arrives. You'll note he's coming with a battalion at his heels just the same, just in case. Otherwise he could take a plane and be here tomorrow."

"Why not a train?" Mackenzie caught a whiff of smoke and felt for his pipe. The bowl was hot in his tunic pocket.

"Probably all rolling stock has to head north. Get troops among the bossmen there and forestall a revolt. The valleys are safe enough, peaceful ranchers and Esper colonies. None of them'll pot-shot Fallonite soldiers marching to garrison Echo and Donner outposts." A dreadful scorn weighted Speyer's words.

"What are we going to do?"

"I assume Fallon's take-over followed legal forms; that there was a quorum," Speyer said. "Nobody will ever agree whether it was really Constitutional. . . . I've been reading this damned message over and over since Irwin decoded it. There's a lot between the lines. I think Brodsky's at large, for instance. If he were under arrest this would've said as much, and there'd have been less worry about rebellion. Maybe some of his household troops smuggled him away in time. He'll be hunted like a jackrabbit, of course."

Mackenzie took out his pipe but forgot he had done so. "Tom's coming with our replacements," he said thinly.

"Yeah. Your son-in-law. That was a smart touch, wasn't it? A kind of hostage for your good behavior, but also a backhand promise that you and yours won't suffer if you report in as ordered. Tom's a good kid. He'll stand by his own."

"This is his regiment too," Mackenzie said. He squared his shoulders. "He wanted to fight West Canada, sure. Young and . . . and a lot of Pacificans did get killed in the Idaho Panhandle during the skirmishes. Women and kids among 'em."

"Well," Speyer said, "you're the colonel, Jimbo. What do we do?"

"Oh, Jesus, I don't know. I'm nothing but a soldier." The pipestem broke in Mackenzie's fingers. "But we're not some bossman's personal militia here. We swore to support the Constitution."

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"I can't see where Brodsky's yielding some of our claims in Idaho is grounds for impeachment. I think he was right."

"Well—"

"A *coup d'état* by any other name would stink as bad. You may not be much of a student of current events, Jimbo, but you know as well as I do what Fallon's Judgeship will mean. War with West Canada is almost the least of it. Fallon also stands for a strong central government. He'll find ways to grind down the old bossman families. A lot of their heads and scions will die in the front lines; that stunt goes back to David and Uriah. Others will be accused of collusion with the Brodsky people—not altogether falsely—and impoverished by fines. Esper communities will get nice big land grants, so their economic competition can bankrupt still other estates. Later wars will keep bossmen away for years at a time, unable to supervise their own affairs, which will therefore go to the devil. And thus we march toward the glorious goal of Reunification."

"If Esper Central favors him, what can we do? I've heard enough about psi blasts. I can't ask my men to face them."

"You could ask your men to face the Hellbomb itself, Jimbo, and they would. A Mackenzie has commanded the Rolling Stones for over fifty years."

"Yes. I thought Tom, someday—"

"We've watched this brewing for a long time. Remember the talk we had about it last week?"

"Uh-huh."

"I might also remind you that the Constitution was written explicitly 'to confirm the separate regions in their ancient liberties.'"

"Let me alone!" Mackenzie shouted. "I don't know what's right or wrong, I tell you! Let me alone!"

Speyer fell silent, watching him through a screen of foul smoke. Mackenzie walked back and forth a while, boots slamming the floor like drumbeats. Finally he threw the broken pipe across the room so it shattered.

"Okay." He must ram each word past the tension in his throat. "Irwin's a good man who can keep his lip buttoned. Send him out to cut the telegraph line a few miles downhill. Make it look as if the storm did it. The wire breaks often enough, heaven knows. Officially, then, we never got GHQ's message. That gives us a few days to contact Sierra Command HQ. I won't go against General Cruikshank . . . but I'm pretty sure which way he'll go if he sees a chance. Tomorrow we prepare for action. It'll be no trick to throw back Hollis' battalion, and they'll need a while to bring some real strength against us. Before then the first snow should be

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along, and we'll be shut off for the winter. Only we can use skis and snowshoes, ourselves, to keep in touch with the other units and organize something. By spring—we'll see what happens."

"Thanks, Jimbo." The wind almost drowned Speyer's words.

"I'd . . . I'd better go tell Laura."

"Yeah." Speyer squeezed Mackenzie's shoulder. There were tears in the major's eyes.

Mackenzie went out with parade-ground steps, ignoring Irwin: down the hall, down a stairway at its other end, past guarded doors where he returned salutes without really noticing, and so to his own quarters in the south wing.

His daughter had gone to sleep already. He took a lantern off its hook in his bleak little parlor, and entered her room. She had come back here while her husband was in San Francisco.

For a moment Mackenzie couldn't quite remember why he had sent Tom there. He passed a hand over his stubbly scalp, as if to squeeze something out . . . oh, yes, ostensibly to arrange for a new issue of uniforms; actually to get the boy out of the way until the political crisis had blown over. Tom was too honest for his own good, an admirer of Fallon and the Esper movement. His outspokenness had led to friction with his brother officers. They were mostly of bossman stock or from well-to-do protectee families. The existing social order had been good to them. But Tom Danielis began as a fisher lad in a poverty-stricken village on the Mendocino coast. In spare moments he'd learned the three R's from a local Esper; once literate, he joined the army and earned a commission by sheer guts and brains. He had never forgotten that the Espers helped the poor and that Fallon promised to help the Espers. . . . Then, too, battle, glory, Reunification Federal Democracy, those were heady dreams when you were young.

Laura's room was little changed since she left it to get married last year. And she had only been seventeen then. Objects survived which had belonged to a small person with pigtails and starched frocks—a teddy bear loved to shapelessness, a doll house her father had built, her mother's picture drawn by a corporal who stopped a bullet at Salt Lake. Oh, God, how much she had come to look like her mother.

Dark hair streamed over a pillow turned gold by the light. Mackenzie shook her as gently as he was able. She awoke instantly, and he saw the terror within her.

"Dad! Anything about Tom?"

"He's okay." Mackenzie set the lantern on the floor and himself on the edge of the bed. Her fingers were cold where they caught at his hand.

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"He isn't," she said. "I know you too well."

"He's not been hurt yet. I hope he won't be."

Mackenzie braced himself. Because she was a soldier's daughter, he told her the truth in a few words; but he was not strong enough to look at her while he did. When he had finished, he sat dully listening to the rain.

"You're going to revolt," she whispered.

"I'm going to consult with SCHQ and follow my commanding officer's orders," he said.

"You know what they'll be . . . once he knows you'll back him."

Mackenzie shrugged. His head had begun to ache. Hangover started already? He'd need a good deal more booze before he could sleep tonight. No, no time for sleep—yes, there would be. Tomorrow would do to assemble the regiment in the courtyard and address them from the breech of Black Hepzibah, as a Mackenzie of the Rolling Stones always addressed his men, and—He found himself ludicrously recalling a day when he and Nora and this girl here had gone rowing on Lake Tahoe. The water was the color of Nora's eyes, green and blue and with sunlight flimmering across the surface, but so clear you could see the rocks on the bottom; and Laura's own little bottom had stuck straight in the air as she trailed her hands astern.

She sat thinking for a space before saying flatly: "I suppose you can't be talked out of it." He shook his head. "Well, can I leave tomorrow early, then?"

"Yes. I'll get you a coach."

"T-t-to hell with that. I'm better in the saddle than you are."

"Okay. A couple of men to escort you, though." Mackenzie drew a long breath. "Maybe you can persuade Tom—"

"No. I can't. Please don't ask me to, Dad."

He gave her the last gift he could: "I wouldn't want you to stay. That'd be shirking your own duty. Tell Tom I still think he's the right man for you. Goodnight, duck." It came out too fast, but he dared not delay. When she began to cry he must unfold her arms from his neck and depart the room.

"But I had not expected so much killing!"

"Nor I . . . at this stage of things. There will be more yet, I am afraid, before the immediate purpose is achieved."

"You told me—"

"I told you our hopes, Mwyr. You know as well as I that the Great Science is only exact on the broadest scale of history. Individual events are subject to statistical fluctuation."

"That is an easy way, is it not, to describe sentient beings dying in the mud?"

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"You are new here. Theory is one thing, adjustment to practical necessities is another. Do you think it does not hurt me to see that happen which I myself have helped plan?"

"Oh, I know, I know. Which makes it no easier to live with my guilt."

"To live with your responsibilities, you mean."

"Your phrase."

"No, this is not semantic trickery. The distinction is real. You have read reports and seen films, but I was here with the first expedition. And here I have been for more than two centuries. Their agony is no abstraction to me."

"But it was different when we first discovered them. The aftermath of their nuclear wars was still so horribly present. That was when they needed us—the poor starveling anarchs—and we, we did nothing but observe."

"Now you are hysterical. Could we come in blindly, ignorant of every last fact about them, and expect to be anything but one more disruptive element? An element whose effects we ourselves would not have been able to predict. That would have been criminal indeed, like a surgeon who started to operate as soon as he met the patient, without so much as taking a case history. We had *to let them go their own way while we studied in secret. You have no idea how desperately hard we worked to gain information and understanding. That work goes on. It was only seventy years ago that we felt enough assurance to introduce the first new factor into this one selected society. As we continue to learn more, the plan will be adjusted. It may take us a thousand years to complete our mission."*

"But meanwhile they have pulled themselves back out of the wreckage. They are finding their own answers to their problems. What right have we to—"

"I begin to wonder, Mwyr, what right you have to claim even the title of apprentice psychodynamician. Consider what their 'answers' actually amount to. Most of the planet is still in a state of barbarism. This continent has come farthest toward recovery, because of having the widest distribution of technical skills and equipment before the destruction. But what social structure has evolved? A jumble of quarrelsome successor states. A feudalism where the balance of political, military, and economic power lies with a landed aristocracy, of all archaic things. A score of languages and subcultures developing along their own incompatible lines. A blind technology-worship inherited from the ancestral society, that unchecked will lead them in the end back to a machine civilization as demoniac as the one that tore itself apart three centuries ago.

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Are you distressed that a few hundred men have been killed because our agents promoted a revolution which did not come off quite so smoothly as we hoped? Well, you have the word of the Great Science itself that without our guidance, the totalled misery of this race through the next five thousand years would outweigh by three orders of magnitude whatever pain we are forced to inflict."

"—Yes. Of course. I realize I am being emotional. It is difficult not to be at first, I suppose."

"You should be thankful that your initial exposure to the hard necessities of the plan was so mild. There is worse to come."

"So I have been told."

"In abstract terms. But consider the reality. A government ambitious to restore the old nation will act aggressively, thus embroiling itself in prolonged wars with powerful neighbors. Both directly and indirectly, through the operation of economic factors they are too naive to control, the aristocrats and freeholders will be eroded away by those wars. Anomic democracy will replace their system, first dominated by a corrupt capitalism and later by sheer force of whoever holds the central government. But there will be no place for the vast displaced proletariat, the one-time landowners and the foreigners incorporated by conquest. They will offer fertile soil to any demagogue. The empire will undergo endless upheaval, civil strife, despotism, decay, and outside invasion. Oh, we will have much to answer for before we are done!"

"Do you think . . . when we see the final result . . . will the blood wash off us?"

"No. We pay the heaviest price of all."

Spring in the high Sierra is cold, wet, snowbanks melting away from forest floor and giant rocks, rivers in spate until their canyons clang, a breeze ruffling puddles in the road. The first green breath across the aspen seems infinitely tender against pine and spruce, which gloom into a brilliant sky. A raven swoops low, gruk, gruk, look out for that damn hawk! But then you cross timberline and the world becomes tumbled blue-gray immensity, with the sun ablaze on what snows remain and the wind sounding hollow in your ears.

Captain Thomas Danielis, Field Artillery, Loyalist Army of the Pacific States, turned his horse aside. He was a dark young man, slender and snubnosed. Behind him a squad slipped and cursed, dripping mud from feet to helmets, trying to get a gun carrier unstuck. Its alcohol motor was too feeble to do more than spin the wheels. The infantry squelched on past; stoop-shouldered, worn

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down by altitude and a wet bivouac and pounds of mire on each boot. Their line snaked from around a prowlike crag, up the twisted road and over the ridge ahead. A gust brought the smell of sweat to Danielis.

But they were good joes, he thought. Dirty, dogged, they did their profane best. His own company, at least, was going to get hot food tonight, if he had to cook the quartermaster sergeant.

The horse's hoofs banged on a block of ancient concrete jutting from the muck. If this had been the old days . . . but wishes weren't bullets. Beyond this part of the range lay lands mostly desert, claimed by the Saints, who were no longer a menace but with whom there was scant commerce. So the mountain highways had never been considered worth repaving, and the railroad ended at Hangtown. Therefore the expeditionary force to the Tahoe area must slog through unpeopled forests and icy uplands, God help the poor bastards.

God help them in Nakamura, too, Danielis thought. His mouth drew taut, he slapped his hands together and spurred the horse with needless violence. Sparks shot from iron shoes as the beast clattered off the road toward the highest point of the ridge. The man's saber banged his leg.

Reining in, he unlimbered his field glasses. From here he could look across a jumbled sweep of mountainscape, where cloud shadows sailed over cliffs and boulders, down into the gloom of a canyon and across to the other side. A few tufts of grass thrust out beneath him, mummy brown, and a marmot wakened early from winter sleep whistled somewhere in the stone confusion. He still couldn't see the castle. Nor had he expected to, as yet. He knew this country . . . how well he did!

There might be a glimpse of hostile activity, though. It had been eerie to march this far with no sign of the enemy, of anyone else whatsoever; to send out patrols in search of rebel units that could not be found, to ride with shoulder muscles tense against the sniper's arrow that never came. Old Jimbo Mackenzie was not one to sit passive behind walls, and the Rolling Stones had not been given their nickname in jest.

If Jimbo is alive. How do I know he is? That buzzard yonder may be the very one which hacked out his eyes.

Danielis bit his lip and made himself look steadily through the glasses. Don't think about Mackenzie, how he outroared and outdrank and outlaughed you and you never minded, how he sat knotting his brows over the chessboard where you could mop him up ten times out of ten and *he* never cared, how proud and happy he stood at the wedding. . . . Nor

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think about Laura, who tried to keep you from knowing how often she wept at night, who now bore a grandchild beneath her heart and woke alone in the San Francisco house from the evil dreams of pregnancy. Every one of those dogfaces plodding toward the castle which has killed every army ever sent against it—every one of them has somebody at home and Hell rejoices at how many have somebody on the rebel side. Better look for hostile spoor and let it go at that.

Wait! Danielis stiffened. A rider—He focused. *One of our own.* Fallon's army added a blue band to the uniform. *Returning scout.* A tingle went along his spine. He decided to hear the report firsthand. But the fellow was still a mile off, perforce riding slowly over the hugger-mugger terrain. There was no hurry about intercepting him. Danielis continued to survey the land.

A reconnaissance plane appeared, an ungainly dragonfly with sunlight flashing off a propellor head. Its drone bumbled among rock walls, where echoes threw the noise back and forth. Doubtless an auxiliary to the scouts, employing two-way radio communication. Later the plane would work as a spotter for artillery. There was no use making a bomber of it; Fort Nakamura was proof against anything that today's puny aircraft could drop, and might well shoot the thing down.

A shoe scraped behind Danielis. Horse and man whirled as one. His pistol jumped into his hand.

It lowered. "Oh. Excuse me, Philosopher."

The man in the blue robe nodded. A smile softened his stern face. He must be around sixty years old, hair white and skin lined, but he walked these heights like a wild goat. The Yang and Yin symbol burned gold on his breast.

"You're needlessly on edge, son," he said. A trace of Texas accent stretched out his words. The Espers obeyed the laws wherever they lived, but acknowledge no country their own: nothing less than mankind, perhaps ultimately all life through the space-time universe. Nevertheless, the Pacific States had gained enormously in prestige and influence when the Order's unenterable Central was established in San Francisco at the time when the city was being rebuilt in earnest. There had been no objection—on the contrary—to the Grand Seeker's desire that Philosopher Woodworth accompany the expedition as an observer. Not even from the chaplains; the churches had finally gotten it straight that the Esper teachings were neutral with respect to religion.

Danielis managed a grin. "Can you blame me?"

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"No blame. But advice. Your attitude isn't useful. Does nothin' but wear you out. You've been fightin' a battle for weeks before it began."

Danielis remembered the apostle who had visited his home in San Francisco—by invitation, in the hope that Laura might learn some peace. His simile had been still homelier: "You only need to wash one dish at a time." The memory brought a smart to Danielis' eyes, so that he said roughly:

"I might relax if you'd use your powers to tell me what's waiting for us."

"I'm no adept, son. Too much in the material world, I'm afraid. Somebody's got to do the practical work of the Order, and someday I'll get the chance to retire and explore the frontier inside me. But you need to start early, and stick to it a lifetime, to develop your full powers." Woodworth looked across the peaks, seemed almost to merge himself with their loneliness.

Danielis hesitated to break into that meditation. He wondered what practical purpose the Philosopher was serving on this trip. To bring back a report, more accurate than untrained senses and undisciplined emotions could prepare? Yes, that must be it. The Espers might yet decide to take a hand in this war. However reluctantly, Central had allowed the awesome psi powers to be released now and again, when the Order was seriously threatened, and Judge Fallon was a better friend to them than Brodsky or the earlier Senate of Bossmen and House of People's Deputies had been.

The horse stamped and blew out its breath in a snort. Woodworth glanced back at the rider. "If you ask me, though," he said, "I don't reckon you'll find much doin' around here. I was in the Rangers myself, back home, before I saw the Way. This country feels empty."

"If we could know!" Danielis exploded. "They've had the whole winter to do what they liked in the mountains, while the snow kept us out. What scouts we could get in reported a beehive—as late as two weeks ago. What have they planned?"

Woodworth made no reply.

It flooded from Danielis, he couldn't stop, he had to cover the recollection of Laura bidding him goodbye on his second expedition against her father, six months after the first one came home in bloody fragments:

"If we had the resources! A few wretched little railroads and motor cars; a handful of aircraft; most of our supply trains drawn by mules—what kind of mobility does that give us? And what really drives me crazy . . . we know how to make what they had in the old days. We've got the books, the information. More, maybe, than

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the ancestors. I've watched the electrosmith at Fort Nakamura turn out transistor units with enough bandwidth to carry television, no bigger than my fist. I've seen the scientific journals, the research labs, biology, chemistry, astronomy, mathematics. And all useless!"

"Not so," Woodworth answered mildly. "Like my own Order, the community of scholarship's becomin' supranational. Printin' presses, radiophones, telescribes —"

"I say useless. Useless to stop men killing each other because there's no authority strong enough to make them behave. Useless to take a farmer's hands off a horse-drawn plow and put them on the wheel of a tractor. We've got the knowledge, but we can't apply it."

"You do apply it, son, where too much power and industrial plant isn't required. Remember, the world's a lot poorer in natural resources than it was before the Hellbombs. I've seen the Black Lands myself, where the firestorm passed over the Texas oilfields." Woodworth's serenity cracked a little. He turned his eyes back to the peaks.

"There's oil elsewhere," Danielis insisted. "And coal, iron, uranium, everything we need. But the world hasn't got the organization to get at it. Not in any quantity. So we fill the Central Valley with crops that'll yield alcohol, to keep a few motors turning; and we import a dribble of other stuff along an unbelievably inefficient chain of middlemen; and most of it's eaten by the armies." He jerked his head toward that part of the sky which the handmade airplane had crossed. "That's one reason we've got to have Reunification. So we can rebuild."

"And the other?" Woodworth asked softly.

"Democracy—universal suffrage—" Danielis swallowed. "And so fathers and sons won't have to fight each other again."

"Those are better reasons," Woodworth said. "Good enough for the Espers to support. But as for that machinery you want—" He shook his head. "No, you're wrong there. That's no way for men to live."

"Maybe not," Danielis said. "Though my own father wouldn't have been crippled by overwork if he'd had some machines to help him. . . . Oh, I don't know. First things first. Let's get this war over with and argue later." He remembered the scout, now gone from view. "Pardon me, Philosopher, I've got an errand."

The Esper raised his hand in token of peace. Danielis cantered off.

Splashing along the roadside, he saw the man he wanted, halted by Major Jacobsen. The latter, who must have sent him out, sat

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mounted near the infantry line. The scout was a Klamath Indian, stocky in buckskins, a bow on his shoulder. Arrows were favored over guns by many of the men from the northern districts: cheaper than bullets, no noise, less range but as much firepower as a bolt-action rifle. In the bad old days before the Pacific States had formed their union, archers along forest trails had saved many a town from conquest; they still helped keep that union loose.

"Ah, Captain Danielis," Jacobsen hailed. "You're just in time. Lieutenant Smith was about to report what his detachment found out."

"And the plane," said Smith imperturbably. "What the pilot told us he'd seen from the air gave us the guts to go there and check for ourselves."

"Well?"

"Nobody around."

"What?"

"Fort's been evacuated. So's the settlement. Not a soul."

"But—but—" Jacobsen collected himself. "Go on."

"We studied the signs as best's we could. Looks like noncombatants left some time ago. By sledge and ski, I'd guess, maybe north to some strong point. I suppose the men shifted their own stuff at the same time, gradual-like, what they couldn't carry with 'em at the last. Because the regiment and its support units, even field artillery, pulled out just three-four days ago. Ground's all tore up. They headed downslope, sort of west by northwest, far's we could tell from what we saw."

Jacobsen choked. "Where are they bound?"

A flaw of wind struck Danielis in the face and ruffled the horses' manes. At his back he heard the slow plop and squish of boots, groan of wheels, chuff of motors, rattle of wood and metal, yells and whipcracks of muleskinners. But it seemed very remote. A map grew before him, blotting out the world.

The loyalist army had had savage fighting the whole winter, from the Trinity Alps to Puget Sound—for Brodsky had managed to reach Mount Rainier, whose lord had furnished broadcasting facilities, and Rainier was too well fortified to take at once. The bossmen and the autonomous tribes rose in arms, persuaded that a usurper threatened their damned little local privileges. Their protectees fought beside them, if only because no rustic had been taught any higher loyalty than to his patron. West Canada, fearful of what Fallon might do when he got the chance, lent the rebels aid that was scarcely even clandestine.

Nonetheless, the national army was stronger: more matériel, better organization, above everything

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an ideal of the future. Cinc O'Donnel had outlined a strategy —concentrate the loyal forces at a few points, overwhelm resistance, restore order and establish bases in the region, then proceed to the next place—which worked. The government now controlled the entire coast, with naval units to keep an eye on the Canadians in Vancouver and guard the important Hawaii trade routes; the northern half of Washington almost to the Idaho line; the Columbia Valley; central California as far north as Redding. The remaining rebellious Stations and towns were isolated from each other in mountains, forests, deserts. Bossdom after bossdom fell as the loyalists pressed on, defeating the enemy in detail, cutting him off from supplies and hope. The only real worry had been Cruikshank's Sierra Command, an army in its own right rather than a levy of yokels and citymen, big and tough and expertly led. This expedition against Fort Nakamura was only a small part of what had looked like a difficult campaign.

But now the Rolling Stones had pulled out. Offered no fight whatsoever. Which meant that their brother Catamounts must also have evacuated. You don't give up one anchor of a line you intend to hold. So?

"Down into the valleys," Danielis said; and there sounded in his ears, crazily, the voice of Laura as she used to sing. *Down in the valley, valley so low.*

"Judas!" the major exclaimed. Even the Indian grunted as if he had taken a belly blow. "No, they couldn't. We'd have known."

Hang your head over, hear the wind blow. It hooted across cold rocks.

"There are plenty of forest trails," Danielis said. "Infantry and cavalry could use them, if they're accustomed to such country. And the Cats are. Vehicles, wagons, big guns, that's slower and harder. But they only need to outflank us, then they can get back onto Forty and Fifty—and cut us to pieces if we attempt pursuit. I'm afraid they've got us boxed."

"The eastern slope —" said Jacobsen helplessly.

"What for? Want to occupy a lot of sagebrush? No, we're trapped here till they deploy in the flatlands." Danielis closed a hand on his saddlehorn so that the knuckles went bloodless. "I miss my guess if this isn't Colonel Mackenzie's idea. It's his style, for sure."

"But then they're between us and Frisco! With damn near our whole strength in the north—"

Between me and Laura, Danielis thought.

He said aloud: "I suggest, major, we get hold of the C.O. at once. And then we better get on

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the radio." From some well he drew the power to raise his head. The wind lashed his eyes. "This needn't be a disaster. They'll be easier to beat out in the open, actually, once we come to grips."

Roses love sunshine, violets love dew,
Angels in heaven know I love you.

The rains which fill the winter of the California lowlands were about ended. Northward along a highway whose pavement clopped under hoofs, Mackenzie rode through a tremendous greenness. Eucalyptus and live oak, flanking the road, exploded with new leaves. Beyond them on either side stretched a checkerboard of fields and vineyards, intricately hued, until the distant hills on the right and the higher, near ones on the left made walls. The freeholder houses that had been scattered across the land a ways back were no longer to be seen. This end of the Napa Valley belonged to the Esper community at St. Helena. Clouds banked like white mountains over the western ridge. The breeze bore to Mackenzie a smell of growth and turned earth.

Behind him it rumbled with men. The Rolling Stones were on the move. The regiment proper kept to the highway, three thousand boots slamming down at once with an earthquake noise, and so did the guns and wagons. There was no immediate danger of attack. But the cavalrymen attached to the force must needs spread out. The sun flashed off their helmets and lance heads.

Mackenzie's attention was directed forward. Amber walls and red tile roofs could be seen among plum trees that were a surf of pink and white blossoms. The community was big, several thousand people. The muscles tightened in his abdomen. "Think we can trust them?" he asked, not for the first time. "We've only got a radio agreement to a parley."

Speyer, riding beside him, nodded. "I expect they'll be honest. Particularly with our boys right outside. Espers believe in non-violence anyway."

"Yeah, but if it did come to fighting—I know there aren't very many adepts so far. The Order hasn't been around long enough for that. But when you get this many Espers together, there's bound to be a few who've gotten somewhere with their damned psionics. I don't want my men blasted, or lifted in the air and dropped, or any such nasty thing."

Speyer threw him a sidelong glance. "Are you scared of them, Jimbo?" he murmured.

"Hell, no!" Mackenzie wondered if he was a liar or not. "But I don't like 'em."

"They do a lot of good. Among the poor, especially."

"Sure, sure. Though any decent

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bossman looks after his own protectees, and we've got things like churches and hospices as well. I don't see where just being charitable—and they can afford it, with the profits they make on their holdings—I don't see where that gives any right to raise the orphans and pauper kids they take in, the way they do: so's to make the poor tikes unfit for life anywhere outside."

"The object of that, as you well know, is to orient them toward the so-called interior frontier. Which American civilization as a whole is not much interested in. Frankly, quite apart from the remarkable powers some Espers have developed, I often envy them."

"You, Phil?" Mackenzie goggled at his friend.

The lines drew deep in Speyer's face. "This winter I've helped shoot a lot of my fellow countrymen," he said low. "My mother and wife and kids are crowded with the rest of the Village in the Mount Lassen fort, and when we said goodbye we knew it was quite possibly permanent. And in the past I've helped shoot a lot of other men who never did me any personal harm." He sighed. I've often wondered what it's like to know peace, inside as well as outside."

MacKenzie sent Laura and Tom out of his head.

"Of course," Speyer went on, "the fundamental reason you—and I for that matter—distrust the Espers is that they do represent something alien to us. Something that may eventually choke out the whole concept of life that we grew up with. You know, a couple weeks back in Sacramento I dropped in at the University research lab to see what was going on. Incredible! The ordinary soldier would swear it was witchwork. It was certainly more weird than . . . than simply reading minds or moving objects by thinking at them. But to you or me it's a shiny new marvel. We'll wallow in it.

"Now why's that? Because the lab is scientific. Those men work with chemical, electronics, subviral particles. That fits into the educated American's world-view. But the mystic unity of creation . . . no, not our cup of tea. The only way we can hope to achieve Oneness is to renounce everything we've ever believed in. At your age or mine, Jimbo, a man is seldom ready to tear down his whole life and start from scratch."

"Maybe so." Mackenzie lost interest. The settlement was quite near now.

He turned around to Captain Hulse, riding a few paces behind. "Here we go," he said. "Give my compliments to Lieutenant Colonel Yamaguchi and tell him he's in charge till we get back. If anything seems suspicious, he's to act at his own discretion."

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"Yes, sir." Hulse saluted and wheeled smartly about. There had been no practical need for Mackenzie to repeat what had long been agreed on; but he knew the value of ritual. He clicked his big sorrel gelding into a trot. At his back he heard bugles sound orders and sergeants howl at their platoons.

Speyer kept pace. Mackenzie had insisted on bringing an extra man to the discussion. His own wits were probably no match for a high-level Esper, but Phil's might be.

Not that there's any question of diplomacy or whatever. I hope. To ease himself, he concentrated on what was real and present—hoofbeats, the rise and fall of the saddle beneath him, the horse's muscles rippling between his thighs, creak and jingle of his saber belt, the clean odor of the animal—and suddenly remembered this was the sort of trick the Espers recommended.

None of their communities was walled, as most towns and every bossman's Station was. The officers turned off the highway and went down a street between colonnaded buildings. Side streets ran off in both directions. The settlement covered no great area, though, being composed of groups that lived together, sodalities or superfamilies or whatever you wanted to call them. Some hostility toward the Order and a great many dirty jokes stemmed from that practice. But Speyer, who should know, said there was no more sexual swapping around than in the outside world. The idea was simply to get away from possessiveness, thee versus me, and to raise children as part of a whole rather than an insular clan.

The kids were out, staring round-eyed from the porticos, hundreds of them. They looked healthy and, underneath a natural fear of the invaders, happy enough. But pretty solemn, Mackenzie thought; and all in the same blue garb. Adults stood among them, expressionless. Everybody had come in from the fields as the regiment neared. The silence was like barricades. Mackenzie felt sweat begin to trickle down his ribs. When he emerged on the central square, he let out his breath in a near gasp.

A fountain, the basin carved into a lotus, tinkled at the middle of the plaza. Flowing trees stood around it. The square was defined on three sides by massive buildings that must be for storage. On the fourth side rose a smaller temple-like structure with a graceful cupola, obviously headquarters and meeting house. On its lowest step were ranked half a dozen blue-robed men, five of them husky youths. The sixth was middle-aged, the Yang and Yin on his breast. His features held an implacable calm.

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Mackenzie and Speyer drew rein. The colonel flipped a soft salute. "Philosopher Gaines? I'm Mackenzie, here's Major Speyer." He swore at himself for being so awkward about it and wondered what to do with his hands. The young fellows he understood, more or less; they watched him with badly concealed hostility. But he had some trouble meeting Gaines' eyes.

The settlement leader inclined his head. "Welcome, gentlemen. Won't you come in?"

Mackenzie dismounted, hitched his horse to a post and removed his helmet. His worn reddish-brown uniform felt shabbier yet in these surroundings. "Thanks. Uh, I'll have to make this quick."

"To be sure. Follow me, please."

Stiff-backed, the young men trailed after their elders, through an entry chamber and down a short hall. Speyer looked around at the mosaics. "Why, this is lovely," he murmured.

"Thank you," said Gaines. "Here's my office." He opened a door of superbly grained walnut and gestured the visitors through. When he closed it behind himself, the acolytes waited outside.

The room was austere, white-washed walls enclosing little more than a desk, a shelf of books, and some backless chairs. A window opened on a garden. Gaines sat down. Mackenzie and Speyer followed suit.

"We'd better get right to business," the colonel blurted.

Gaines said nothing. At last Mackenzie must plow ahead:

"Here's the situation. Our force is to occupy Calistoga, with detachments on either side of the hills. That way we'll control both the Napa Valley and the Valley of the Moon . . . from the northern ends, at least. The best place to station our eastern wing is here. We plan to establish a fortified camp in the field yonder. I'm sorry about the damage to your crops, but you'll be compensated once the proper government has been restored. And food, medicine—you understand this army has to requisition such items, but we won't let anybody suffer undue hardship and we'll give receipts. Uh, as a precaution we'll need to quarter a few men in this community, to sort of keep an eye on things. They'll interfere as little as possible. Okay?"

"The charter of the Order guarantees exemption from military requirements," Gaines answered evenly. "In fact, no armed man is supposed to cross the boundary of any land held by an Esper settlement. I cannot be party to a violation of the law, colonel."

"If you want to split legal hairs, Philosopher," Speyer said, "then I'll remind you that both Fallon and Judge Brodsky have declared martial law. Ordinary rules are suspended."

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Gaines smiled. "Since only one government can be legitimate," he said, "the proclamations of the other are necessarily null and void. To a disinterested observer, it would appear that Judge Fallon's title is the stronger, especially when his side controls a large continuous area rather than some scattered bossdoms."

"Not any more, it doesn't," Mackenzie snapped.

Speyer gestured him back. "Perhaps you haven't followed the developments of the last few weeks, Philosopher," he said. "Allow me to recapitulate. The Sierra Command stole a march on the Fallonites and came down out of the mountains. There was almost nothing left in the middle part of California to oppose us, so we took over rapidly. By occupying Sacramento, we control river and rail traffic. Our bases extend south below Bakersfield, with Yosemite and King's Canyon not far away to provide sites for extremely strong positions. When we've consolidated this northern end of our gains, the Fallonite forces around Redding will be trapped between us and the powerful bossmen who still hold out in the Trinity, Shasta, and Lassen regions. The very fact of our being here has forced the enemy to evacuate the Columbia Valley, so that San Francisco may be defended. It's an open question which side today has the larger territory."

"What about the army that went into the Sierra against you?" Gaines inquired shrewdly. "Have you contained them?"

Mackenzie scowled. "No. That's no secret. They got out through the Mother Lode country and went around us. They're down in Los Angeles and San Diego now."

"A formidable host. Do you expect to stand them off indefinitely?"

"We're going to make a hell of a good try," Mackenzie said. "Where we are, we've got the advantage of interior communications. And most of the freeholders are glad to slip us word about whatever they observe. We can concentrate at any point the enemy starts to attack."

"Pity that this rich land must also be torn apart by war."

"Yeah. Isn't it?"

"Our strategic objective is obvious enough," Speyer said. "We have cut enemy communications across the middle, except by sea, which is not very satisfactory for troops operating far inland. We deny him access to a good part of his food and manufactured supplies, and most especially to the bulk of his fuel alcohol. The backbone of our own side is the bossdoms, which are almost self-contained economic and social units. Before long they'll be in better shape than the rootless army they face. I think Judge Brodsky

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will be back in San Francisco before fall."

"If your plans succeed," Gaines said.

"That's our worry." Mackenzie leaned forward, one fist doubled on his knee. "Okay, Philosopher. I know you'd rather see Fallon come out on top, but I expect you've got more sense than to sign up in a lost cause. Will you cooperate with us?"

"The Order takes no part in political affairs, colonel, except when its own existence is endangered."

"Oh, pipe down. By 'cooperate' I don't mean anything but keeping out from under our feet."

"I am afraid that would still count as cooperation. We cannot have military establishments on our lands."

Mackenzie stared at Gaines' face, which had set into granite lines, and wondered if he had heard aright. "Are you ordering us off?" a stranger asked with his voice.

"Yes," the Philosopher said.

"With our artillery zeroed in on your town?"

"Would you really shell women and children, colonel?"

O Nora—"We don't need to. Our men can walk right in."

"Against psi blasts? I beg you not to have those poor boys destroyed." Gaines paused, then: "I might also point out that by losing your regiment you imperil your whole cause. You are free to march around our holdings and proceed to Calistoga."

Leaving a Fallonite nest at my back, spang across my communications southward. The teeth grated together in Mackenzie's mouth.

Gaines rose. "This discussion is at an end, gentlemen," he said. "You have one hour to get off our lands."

Mackenzie and Speyer stood up too. "We're not done yet," the major said. Sweat studded his forehead and the long nose. "I want to make some further explanations."

Gaines crossed the room and opened the door. "Show these gentlemen out," he said to the five acolytes.

"No, by God!" Mackenzie shouted. He clapped a hand to his sidearm.

"Inform the adepts," Gaines said.

One of the young men turned. Mackenzie heard the slap-slap of his sandals, running down the hall. Gaines nodded. "I think you had better go," he said.

Speyer grew rigid. His eyes shut. They flew open and he breathed, "*Inform* the adepts?"

Mackenzie saw the stiffness break in Gaines' countenance. There was no time for more than a second's bewilderment. His body acted for him. The gun clanked from his holster simultaneously with Speyer's.

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"Get that messenger, Jimbo," the major rapped. "I'll keep these birds covered."

As he plunged forward, Mackenzie found himself worrying about the regimental honor. Was it right to open hostilities when you had come on a parley? But Gaines had cut the talk off himself—

"Stop him!" Gaines yelled.

The four remaining acolytes sprang into motion. Two of them barred the doorway, the other two moved in on either side. "Hold it or I'll shoot!" Speyer cried, and was ignored.

Mackenzie couldn't bring himself to fire on unarmed men. He gave the youngster before him the pistol barrel in his teeth. Bloody-faced, the Esper lurched back. Mackenzie stiff-armed the one coming in from the left. The third tried to fill the doorway. Mackenzie put a foot behind his ankles and pushed. As he went down, Mackenzie kicked him in the temple, hard enough to stun, and jumped over him.

The fourth was on his back. Mackenzie writhed about to face the man. Those arms that hugged him, pinioning his gun, were bear strong. Mackenzie put the butt of his free left hand under the fellow's nose, and pushed. The acolyte must let go. Mackenzie gave him a knee in the stomach, whirled, and ran.

There was not much further commotion behind him. Phil must have them under control. Mackenzie pelted along the hall, into the entry chamber. Where had that goddamn runner gone? He looked out the open entrance, onto the square. Sunlight hurt his eyes. His breath came in painful gulps, there was a stitch in his side, yeah, he was getting old.

Blue robes fluttered from a street. Mackenzie recognized the messenger. The youth pointed at this building. A gabble of his words drifted faintly through Mackenzie's pulse. There were seven or eight men with him—older men, nothing to mark their clothes . . . but Mackenzie knew a high-ranking officer when he saw one. The acolyte was dismissed. Those whom he had summoned crossed the square with long strides.

Terror knotted Mackenzie's bowels. He put it down. A Catamount didn't stampede, even from somebody who could turn him inside out with a look. He could do nothing about the wretchedness that followed, though. *If they clobber me, so much the better. I won't lie awake nights wondering how Laura is.*

The adepts were almost to the steps. Mackenzie trod forth. He swept his revolver in an arc. "Halt!" His voice sounded tiny in the stillness that brooded over the town.

They jarred to a stop and stood

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there in a group. He saw them enforce a catlike relaxation, and their faces became blank visors. None spoke. Finally Mackenzie was unable to keep silent.

"This place is hereby occupied under the laws of war," he said. "Go back to your quarters."

"What have you done with our leader?" asked a tall man. His voice was even but deeply resonant.

"Read my mind and find out," Mackenzie gibed. *No, you're being childish.* "He's okay, long's he keeps his nose clean. You too. Beat it."

"We do not wish to pervert psionics to violence," said the tall man. "Please do not force us."

"Your chief sent for you before we'd done anything," Mackenzie retorted. "Looks like violence was what he had in mind. On your way."

The Espers exchanged glances. The tall man nodded. His companions walked slowly off. "I would like to see Philosopher Gaines," the tall man said.

"You will pretty soon."

"Am I to understand that he is being held a prisoner?"

"Understand what you like." The other Espers were rounding the corner of the building. "I don't want to shoot. Go on back before I have to."

"An impasse of sorts," the tall man said. "Neither of us wishes to injure one whom he considers defenseless. Allow me to conduct you off these grounds."

Mackenzie wet his lips. Weather had chapped them rough. "If you can put a hex on me, go ahead," he challenged. "Otherwise scram."

"Well, I shall not hinder you from rejoining your men. It seems the easiest way of getting you to leave. But I most solemnly warn that any armed force which tries to enter will be annihilated."

Guess I had better go get the boys, at that. Phil can't mount guard on those guys forever.

The tall man went over to the hitching post. "Which of these horses is yours?" he asked blandly.

Almighty eager to get rid of me, isn't he—Holy hellfire! There must be a rear door!

Mackenzie spun on his heel. The Esper shouted. Mackenzie dashed back through the entry chamber. His boots threw echoes at him. No, not to the left, there's only the office that way. Right . . . around this corner—

A long hall stretched before him. A stairway curved from the middle. The other Espers were already on it.

"Halt!" Mackenzie called. "Stop or I'll shoot!"

The two men in the lead sped onward. The rest turned and headed down again, toward him.

He fired with care, to disable rather than kill. The hall reverberated with the explosions. One

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after another they dropped, a bullet in leg or hip or shoulder. With such small targets, Mackenzie missed some shots. As the tall man, the last of them, closed in from behind, the hammer clicked on an empty chamber.

Mackenzie drew his saber and gave him the flat of it alongside the head. The Esper lurched. Mackenzie got past and bounded up the stair. It wound like something in a nightmare. He thought his heart was going to go to pieces.

At the end, an iron door opened on a landing. One man was fumbling with the lock. The other blue-robe attacked.

Mackenzie stuck his sword between the Esper's legs. As his opponent stumbled, the colonel threw a left hook to the jaw. The man sagged against the wall. Mackenzie grabbed the robe of the other and hurled him to the floor. "Get out," he rattled.

They pulled themselves together and glared at him. He thrust air with his blade. "From now on I aim to kill," he said.

"Get help, Dave," said the one who had been opening the door. "I'll watch him." The other went unevenly down the stairs. The first man stood out of saber reach. "Do you want to be destroyed?" he asked.

Mackenzie turned the knob at his back, but the door was still locked. "I don't think you can do it. Not without what's here."

The Esper struggled for self-control. They waited through minutes that stretched. Then a noise began below. The Esper pointed. "We have nothing but agricultural implements," he said, "but you have only that blade. Will you surrender?"

Mackenzie spat on the floor. The Esper went on down.

Presently the attackers came into view. There might be a hundred, judging from the hubbub behind them, but because of the curve Mackenzie could see no more than ten or fifteen—burly fieldhands, their robes tucked high and sharp tools aloft. The landing was too wide for defense. He advanced to the stairway, where they could only come at him two at a time.

A couple of sawtoothed hay knives led the assault. Mackenzie parried one blow and chopped. His edge went into meat and struck bone. Blood ran out, impossibly red, even in the dim light here. The man fell to all fours with a shriek. Mackenzie dodged a cut from the companion. Metal clashed on metal. The weapons locked. Mackenzie's arm was forced back. He looked into a broad suntanned face. The side of his hand smote the young man's larynx. The Esper fell against the one behind and they went down together. It took a while to clear the tangle and resume action.

A pitchfork thrust for the colo-

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nel's belly. He managed to grab it with his left hand, divert the tines, and chop at the fingers on the shaft. A scythe gashed his right side. He saw his own blood but wasn't aware of pain. A flesh wound, no more. He swept his saber back and forth. The forefront retreated from its whistling menace. *But God, my knees are like rubber, I can't hold out another five minutes.*

A bugle sounded. There was a spatter of gunfire. The mob on the staircase congealed. Someone screamed.

Hoofs banged across the ground floor. A voice rasped: "Hold everything, there! Drop those weapons and come on down. First man tries anything gets shot."

Mackenzie leaned on his saber and fought for air. He hardly noticed the Espers melt away.

When he felt a little better, he went to one of the small windows and looked out. Horsemen were in the plaza. Not yet in sight, but nearing, he heard infantry.

Speyer arrived, followed by a sergeant of engineers and several privates. The major hurried to Mackenzie. "You okay, Jimbo? You been hurt!"

"A scratch" Mackenzie said. He was getting back his strength, though no sense of victory accompanied it, only the knowledge of aloneness. The injury began to sting. "Not worth a fuss. Look."

"Yes, I suppose you'll live. Okay, men, get that door open."

The engineers took forth their tools and assailed the lock with a vigor that must spring half from fear. "How'd you guys show up so soon?" Mackenzie asked.

"I thought there'd be trouble," Speyer said, "so when I heard shots I jumped through the window and ran around to my horse. That was just before those clodhoppers attacked you; I saw them gathering as I rode out. Our cavalry got in almost at once, of course, and the dogfaces weren't far behind."

"Any resistance?"

"No, not after we fired a few rounds in the air." Speyer glanced outside. "We're in full possession now."

Mackenzie regarded the door. "Well," he said, "I feel better about our having pulled guns on them in the office. Looks like their adepts really depend on plain old weapons, huh? And Esper communities aren't supposed to have arms. Their charters say so. . . . That was a damn good guess of yours, Phil. How'd you do it?"

"I sort of wondered why the chief had to send a runner to fetch guys that claim to be telepaths. There we go!"

The lock jingled apart. The sergeant opened the door. Mackenzie and Speyer went into the great room under the dome.

They walked around for a long time, wordless, among shapes of

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metal and less identifiable substances. Nothing was familiar. Mackenzie paused at last before a helix which projected from a transparent cube. Formless darknesses swirled within the box, sparked as if with tiny stars.

"I figured maybe the Espers had found a cache of old-time stuff, from just before the Hellbombs," he said in a muffled voice. "Ultra-secret weapons that never got a chance to be used. But this doesn't look like it, think so?"

"No," Speyer said. "It doesn't look to me as if these things were made by human beings at all."

"But do you not understand? They occupied a settlement! That proves to the world that Espers are not invulnerable. And to complete the catastrophe, they seized its arsenal."

"Have no fears about that. No untrained person can activate those instruments. The circuits are locked except in the presence of certain encephalic rhythms which result from conditioning. That same conditioning makes it impossible for the so-called adepts to reveal any of their knowledge to the uninitiated, no matter what may be done to them."

"Yes, I know that much. But it is not what I had in mind. What frightens me is the fact that the revelation will spread. Everyone will know the Esper adepts do not plumb unknown depths of the psyche after all, but merely have access to an advanced physical science. Not only will this lift rebel spirits, but worse, it will cause many, perhaps most of the Order's members to break away in disillusionment."

"Not at once. News travels slowly under present conditions. Also, Mwyr, you underestimate the ability of the human mind to ignore data which conflict with cherished beliefs."

"But—"

"Well, let us assume the worst. Let us suppose that faith is lost and the Order disintegrates. That will be a serious setback to the plan, but not a fatal one. Psionics was merely one bit of folklore we found potent enough to serve as the motivator of a new orientation toward life. There are others, for example the widespread belief in magic among the less educated classes. We can begin again on a different basis, if we must. The exact form of the creed is not important. It is only scaffolding for the real structure: a communal, anti-materialistic social group, to which more and more people will turn for sheer lack of anything else, as the coming empire breaks up. In the end, the new culture can and will discard whatever superstitions gave it the initial impetus."

"A hundred-year setback, at least."

"True. It would be much more

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difficult to introduce a radical alien element now, when the autochthonous society has developed strong institutions of its own, than it was in the past. I merely wish to reassure you that the task is not impossible. I do not actually propose to let matters go that far. The Espers can be salvaged."

"How?"

"We must intervene directly."

"Has that been computed as being unavoidable?"

"Yes. The matrix yields an unambigous answer. I do not like it any better than you. But direct action occurs oftener than we tell neophytes in the schools. The most elegant procedure would of course be to establish such initial conditions in a society that its evolution along desired lines becomes automatic. Furthermore, that would let us close our minds to the distressing fact of our own blood guilt. Unfortunately, the Great Science does not extend down to the details of day-to-day practicality.

"In the present instance, we shall help to smash the reactionaries. The government will then proceed so harshly against its conquered opponents that many of those who accept the story about what was found at St. Helena will not live to spread the tale. The rest . . . well, they will be discredited by their own defeat. Admittedly, the story will linger for lifetimes, whispered here and there. But what of that? Those who believe in the Way will, as a rule, simply be strengthened in their faith, by the very process of denying such ugly rumors. As more and more persons, common citizens as well as Espers, reject materialism, the legend will seem more and more fantastic. It will seem obvious that certain ancients invented the tale to account for a fact that they in their ignorance were unable to comprehend."

"I see. . . ."

"You are not happy here, are you, Mwyr?"

"I cannot quite say. Everything is so distorted."

"Be glad you were not sent to one of the really alien planets."

"I might almost prefer that. There would be a hostile environment to think about. One could forget how far it is to home."

"Three years' travel."

"You say that so glibly. As if three shipboard years were not equal to fifty in cosmic time. As if we could expect a relief vessel daily, not once in a century. And . . . as if the region that our ships have explored amounts to one chip out of this one galaxy!"

"That region will grow until someday it engulfs the galaxy!"

"Yes, yes, yes. I know. Why do you think I chose to become a psychodynamician? Why am I here, learning how to meddle with the destiny of a world where I do

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not belong? 'To create the union of sentient beings, each member species a step toward life's mastery of the universe.' Brave slogan! But in practice, it seems, only a chosen few races are to be allowed the freedom of that universe."

"No so, Mwyr. Consider these ones with whom we are, as you say, meddling. Consider what use they made of nuclear energy when they had it. At the rate they are going, they will have it again within a century or two. Not long after that they will be building spaceships. Even granted that time lag attenuates the effects of interstellar contact, those effects are cumulaive. So do you wish such a band of carnivores turned loose on the galaxy?

"No, let them become inwardly civilized first; then we shall see if they can be trusted. If not, they will at least be happy on their own planet, in a mode of life designed for them by the Great Science. Remember, they have an immemorial aspiration toward peace on earth; but that is something they will never achieve by themselves. I do not pretend to be a very good person, Mwyr. Yet this work that we are doing makes me feel not altogether useless in the cosmos."

Promotion was fast that year, casualties being so high. Captain Thomas Danielis was raised to major for his conspicuous part in putting down the revolt of the Los Angeles citymen. Soon after occurred the Battle of Maricopa, when the loyalists failed bloodily to break the stranglehold of the Sierran rebels on the San Joaquin Valley, and he was brevetted lieutenant colonel. The army was ordered northward and moved warily under the coast ranges, half expecting attack from the east. But the Brodskyites seemed too busy consolidating their latest gains. The trouble came from guerrillas and the hedgehog resistance of bossman Stations. After one particularly stiff clash, they stopped near Pinnacles for a breather.

Danielis made his way through camp, where tents stood in tight rows between the guns and men lay about dozing, talking, gambling, staring at the blank blue sky. The air was hot, pungent with cookfire smoke, horses, mules, dung, sweat, boot oil; the green of the hills that lifted around the site was dulling toward summer brown. He was idle until time for the conference the general had called, but restlessness drove him. *By now I'm a father,* he thought, *and I've never seen my kid.*

At that, I'm lucky, he reminded himself. *I've got my life and limbs.* He remembered Jacobsen dying in his arms at Maricopa. You wouldn't have thought the human body could hold so much blood. Though maybe one was no longer human, when the pain was so great that one could do nothing

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but shriek until the darkness came.

And I used to think war was glamorous. Hunger, thirst, exhaustion, terror, mutilation, death, and forever the sameness, boredom grinding you down to an ox. . . . I've had it. I'm going into business after the war. Economic integration, as the bossman system breaks up, yes, there'll be a lot of ways for a man to get ahead, but decently, without a weapon in his hand—Danielis realized he was repeating thoughts that were months old. What the hell else was there to think about, though?

The large tent where prisoners were interrogated lay near his path. A couple of privates were conducting a man inside. The fellow was blond, burly, and sullen. He wore a sergeant's stripes, but otherwise his only item of uniform was the badge of Warden Echevarry, bossman in this part of the coastal mountains. A lumberjack in peacetime, Danielis guessed from the look of him; a soldier in a private army whenever the interests of Echevarry were threatened; captured in yesterday's engagement.

On impulse, Danielis followed. He got into the tent as Captain Lambert, chubby behind a portable desk, finished the preliminaries.

"Oh." The intelligence officer started to rise. "Yes, sir?"

"At ease," Danielis said. "Just thought I'd listen in."

"Well, I'll try to put on a good show for you." Lambert reseated himself and looked at the prisoner, who stood with hunched shoulders and widespread legs between his guards. "Now, sergeant, we'd like to know a few things."

"I don't have to say nothing except name, rank, and home town," the man growled. "You got those."

"Um-m-m, that's questionable. You aren't a foreign soldier, you're a rebel against the government of your own country."

"The hell I am! I'm an Echevarry man."

"So what?"

"So my Judge is whoever Echevarry says. He says Brodsky. That makes you the rebel."

"The law's been changed."

"Your mucking Fallon got no right to change any laws. Especially part of the Constitution. I'm no hillrunner, captain. I went to school some. And every year our Warden reads his people the Constitution."

"Times have changed since it was drawn," Lambert said. His tone sharpened. "But I'm not going to argue with you. How many riflemen and how many archers in your company?"

Silence.

"We can make things a lot easier for you," Lambert said. "I'm not asking you to do anything treasonable. All I want is to confirm some information I've already got."

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The man shook his head angrily.

Lambert gestured. One of the privates stepped behind the captive, took his arm, and twisted a little.

"Echevarry wouldn't do that to me," he said through white lips.

"Of course not," Lambert said. "You're his man."

"Think I wanna be just a number on some list in Frisco? Damn right I'm my bossman's man!"

Lambert gestured again. The private twisted harder.

"Hold on, there," Danielis barked. "Stop that!"

The private let go, looking surprised. The prisoner drew a sobbing breath.

"I'm amazed at you, Captain Lambert," Danielis said. He felt his own face reddening. "If this has been your usual practice, there's going to be a courtmartial."

"No, sir," Lambert said in a small voice. "Honest. Only . . . they don't talk. Hardly any of them. What'm I supposed to do?"

"Follow the rules of war."

"With rebels?"

"Take that man away," Danielis ordered. The privates made haste to do so.

"Sorry, sir," Lambert muttered. "I guess . . . I guess I've lost too many buddies. I hate to lose more, simply for lack of information."

"Me too." A compassion rose in Danielis. He sat down on the table edge and began to roll a cigaret. "But you see, we aren't in a regular war. And so, by a curious paradox, we have to follow the conventions more carefully than ever before."

"I don't quite understand, sir."

Danielis finished the cigaret and gave it to Lambert: olive branch or something. He started another for himself. "The rebels aren't rebels by their own lights," he said. "They're being loyal to a tradition that we're trying to curb, eventually to destroy. Let's face it, the average bossman is a fairly good leader. He may be descended from some thug who grabbed power by strong-arm methods during the chaos, but by now his family's integrated itself with the region he rules. He knows it, and its people, inside out. He's there in the flesh, a symbol of the community and its achievements, its folkways and essential independence. If you're in trouble, you don't have to work through some impersonal bureaucracy, you go direct to your bossman. His duties are as clearly defined as your own, and a good deal more demanding, to balance his privileges. He leads you in battle and in the ceremonies that give color and meaning to life. Your fathers and his have worked and played together for two or three hundred years. The land is alive with the memories of them. You and he *belong*.

"Well, that has to be swept

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away, so we can go on to a higher level. But we won't reach that level by alienating everyone. We're not a conquering army; we're more like the Householder Guard putting down a riot in some city. The opposition is part and parcel of our own society."

Lambert struck a match for him. He inhaled and finished: "On a practical plane, I might also remind you, captain, that the federal armed forces, Fallonite and Brodskyite together, are none too large. Little more than a cadre, in fact. We're a bunch of younger sons, countrymen who failed, poor citymen, adventurers, people who look to their regiment for that sense of wholeness they've grown up to expect and can't find in civilian life."

"You're too deep for me, sir, I'm afraid," Lambert said.

"Never mind," Danielis sighed. "Just bear in mind, there are a good many more fighting men outside the opposing armies than in. If the bossmen could establish a unified command, that'd be the end of the Fallon government. Luckily, there's too much provincial pride and too much geography between them for this to happen —unless we outrage them beyond endurance. What we want the ordinary freeholder, and even the ordinary bossman, to think, is: 'Well, those Fallonites aren't such bad guys, and if I keep on the right side of them I don't stand to lose much, and should even be able to gain something at the expense of those who fight them to a finish.' You see?"

"Y-yes. I guess so."

"You're a smart fellow, Lambert. You don't have to beat information out of prisoners. Trick it out."

"I'll try, sir."

"Good." Danielis glanced at the watch that had been given him as per tradition, together with a sidearm, when he was first commissioned. (Such items were much too expensive for the common man. They had not been so in the age of mass production; and perhaps in the coming age—) "I have to go. See you around."

He left the tent feeling somewhat more cheerful than before. *No doubt I am a natural-born preacher,* he admitted, *and I never could quite join in the horseplay at mess, and a lot of jokes go completely by me; but if I can get even a few ideas across where they count, that's pleasure enough.* A strain of music came to him, some men and a banjo under a tree, and he found himself whistling along. It was good that this much morale remained, after Maricopa and a northward march whose purpose had not been divulged to anybody.

The confernece tent was big enough to be called a pavilion. Two sentries stood at the entrance. Danielis was nearly the last to arrive, and found himself at the end

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of the table, opposite Brigadier General Perez. Smoke hazed the air and there was a muted buzz of conversation, but faces were taut.

When the blue-robed figure with a Yang and Yin on the breast entered, silence fell like a curtain. Danielis was astonished to recognize Philosopher Woodworth. He'd last seen the man in Los Angeles, and assumed he would stay at the Esper center there. Must have come here by special conveyance, under special orders. . . .

Perez introduced him. Both remained standing, under the eyes of the officers. "I have some important news for you, gentlemen," Perez said most quietly. "You may consider it an honor to be here. It means that in my judgment you can be trusted, first, to keep absolute silence about what you are going to hear, and second, to execute a vital operation of extreme difficulty." Danielis was made shockingly aware that several men were not present whose rank indicated they should be.

"I repeat," Perez said, "any breach of secrecy and the whole plan is ruined. In that case, the war will drag on for months or years. You know how bad our position is. You also know it will grow still worse as our stocks of those supplies the enemy now denies us are consumed. We could even be beaten. I'm not defeatist to say that, only realistic. We could lose the war.

"On the other hand, if this new scheme pans out, we may break the enemy's back this very month."

He paused to let that sink in before continuing:

"The plan was worked out by GHQ in conjunction with Esper Central in San Francisco, some weeks ago. It's the reason we are headed north—" He let the gasp subside that ran through the stifling air. "Yes, you know that the Esper Order is neutral in political disputes. But you also know that it defends itself when attacked. And you probably know that an attack was made on it, by the rebels. They seized the Napa Valley settlement and have been spreading malicious rumors about the Order since then. Would you like to comment on that, Philosopher Woodworth?"

The man in blue nodded and said coolly: "We've our own ways of findin' out things—intelligence service, you might say—so I can give y'all a report of the facts. St. Helena was assaulted at a time when most of its adepts were away, helpin' a new community get started out in Montana." *How did they travel so fast?* Danielis wondered. *Teleport, or what?* "I don't know, myself, if the enemy knew about that or were just lucky. Anyhow, when the two or three adepts that were left came and warned them off, fightin' broke out and the adepts were killed before they could act." He smiled. "We don't

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claim to be immortal, except the way every livin' thing is immortal. Nor infallible, either. So now St. Helena's occupied. We don't figure to take any immediate steps about that, because a lot of people in the community might get hurt.

"As for the yarns the enemy command's been handin' out, well, I reckon I'd do the same, if I had a chance like that. Everybody knows an adept can do things that nobody else can. Troops that realize they've done wrong to the Order are goin' to be scared of supernatural revenge. You're educated men here, and know there's nothin' supernatural involved, just a way to use the powers latent in most of us. You also know the Order doesn't believe in revenge. But the ordinary foot soldier doesn't think your way. His officers have got to restore his spirit somehow. So they fake some equipment and tell him that's what the adepts were really usin'—an advanced technology, sure, but only a set of machines, that can be put out of action if you're brave, same as any other machine. That's what happened.

"Still, it is a threat to the Order; and we can't let an attack on our people go unpunished, either. So Esper Central has decided to help out your side. The sooner this war's over, the better."

A sigh gusted around the table, and a few exultant oaths. The hair stirred on Danielis' neck. Perez lifted a hand.

"Not too fast, please," the general said. "The adepts are not going to go around blasting your opponents for you. It was one hell of a tough decision for them to do as much as they agreed to. I, uh, understand that the, uh, personal development of every Esper will be set back many years by this much violence. They're making a big sacrifice.

"By their charter, they can use psionics to defend an establishment against attack. Okay . . . an assault on San Francisco will be construed as one on Central, their world headquarters."

The realization of what was to come was blinding to Danielis. He scarcely heard Perez' carefully dry continuation:

"Let's review the strategic picture. By now the enemy holds more than half of California, all of Oregon and Idaho, and a good deal of Washington. We, this army, we're using the last land access to San Francisco that we've got. The enemy hasn't tried to pinch that off yet, because the troops we pulled out of the north—those that aren't in the field at present—make a strong city garrison that'd sally out. He's collecting too much profit elsewhere to accept the cost.

"Nor can he invest the city with any hope of success. We still hold Puget Sound and the southern California ports. Our ships bring in ample food and munitions. His own sea power is

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much inferior to ours: chiefly schooners donated by coastal bossmen, operating out of Portland. He might overwhelm an occasional convoy, but he hasn't tried that so far because it isn't worth his trouble; there would be others, more heavily escorted. And of course he can't enter the Bay, with artillery and rocket emplacements on both sides of the Golden Gate. No, about all he can do is maintain some water communication with Hawaii and Alaska.

"Nevertheless, his ultimate object is San Francisco. It has to be —the seat of government and industry, the heart of the nation.

"Well, then, here's the plan. Our army is to engage the Sierra Command and its militia auxiliaries again, striking out of San Jose. That's a perfectly logical maneuver. Successful, it would cut his California forces in two. We know, in fact, that he is already concentrating men in anticipation of precisely such an attempt.

"We aren't going to succeed. We'll give him a good stiff battle and be thrown back. That's the hardest part: to feign a serious defeat, even convincing our own troops, and still maintain good order. We'll have a lot of details to thresh out about that.

"We'll retreat northward, up the Peninsula toward Frisco. The enemy is bound to pursue. It will look like a God-given chance to destroy us and get to the city.

"When he is well into the Peninsula, with the ocean on his left and the Bay on his right, we will outflank him and attack from the rear. The Esper adepts will be there to help. Suddenly he'll be caught, between us and the capital's land defenses. What the adepts don't wipe out, we will. Nothing will remain of the Sierra Command but a few garrisons. The rest of the war will be a mopping up operation.

"It's a brilliant piece of strategy. Like all such, it's damn difficult to execute. Are you prepared to do the job?"

Danielis didn't raise his voice with the others. He was thinking too hard of Laura.

Northward and to the right there was some fighting. Cannon spoke occasionally, or a drumfire of rifles; smoke lay thin over the grass and the wind-gnarled live oaks which covered those hills. But down along the seacoast was only surf, blowing air, a hiss of sand across the dunes.

Mackenzie rode on the beach, where the footing was easiest and the view widest. Most of his regiment were inland. But that was a wilderness: rough ground, woods, the snags of ancient homes, making travel slow and hard. Once this area had been densely peopled, but the firestorm after the Hellbomb scrubbed it clean and today's reduced population could

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not make a go on such infertile soil. There didn't even seem to be any foemen near this left wing of the army.

The Rolling Stones had certainly not been given it for that reason. They could have borne the brunt at the center as well as those outfits which actually were there, driving the enemy back toward San Francisco. They had been blooded often enough in this war, when they operated out of Calistoga to help expel the Fallonites from northern California. So thoroughly had that job been done that now only a skeleton force need remain in charge. Nearly the whole Sierra Command had gathered at Modesto, met the northward-moving opposition army that struck at them out of San Jose, and sent it in a shooting retreat. Another day or so, and the white city should appear before their eyes.

And there the enemy will be sure to make a stand, Mackenzie thought, *with the garrison to reinforce him. And his positions will have to be shelled; maybe we'll have to take the place street by street. Laura, kid, will you be alive at the end?*

Of course, maybe it won't happen that way. Maybe my scheme'll work and we'll win easy—What a horrible word "maybe" is! He slapped his hands together with a pistol sound.

Speyer threw him a glance. The major's people were safe; he'd even been able to visit them at Mount Lassen, after the northern campaign was over. "Rough," he said.

"Rough on everybody," Mackenzie said with a thick anger. "This is a filthy war."

Speyer shrugged. "No different from most, except that this time Pacificans are on the receiving as well as the giving end."

"You know damn well I never liked the business, anyplace."

"What man in his right mind does?"

"When I want a sermon I'll ask for one."

"Sorry," said Speyer, and meant it.

"I'm sorry too," said Mackenzie, instantly contrite. "Nerves on edge. Damnation! I could almost wish for some action."

"Wouldn't be surprised if we got some. This whole affair smells wrong to me."

Mackenzie looked around him. On the right the horizon was bounded by hills, beyond which the low but massive San Bruno range lifted. Here and there he spied one of his own squads, afoot or ahorse. Overhead sputtered a plane. But there was plenty of concealment for a redoubt. Hell could erupt at any minute . . . though necessarily a small hell, quickly reduced by howitzer or bayonet, casualties light. (Huh! Every one of those light casualties was a man dead, with women and children to weep for him, or a man staring at

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the fragment of his arm, or a man with eyes and face gone in a burst of shot, and what kind of unsoldierly thoughts were these?)

Seeking comfort, Mackenzie glanced left. The ocean rolled greenish gray, glittering far out, rising and breaking in a roar of white combers closer to land. He smelled salt and kelp. A few gulls mewed above dazzling sands. There was no sail or smokepuff—only emptiness. The convoys from Puget Sound to San Francisco, and the lean swift ships of the coastal bossmen, were miles beyond the curve of the world.

Which was as it should be. Maybe things were working out okay on the high waters. One could only try, and hope. And . . . it had been his suggestion, James Mackenzie speaking at the conference General Cruikshank held between the battles of Mariposa and San Jose; the same James Mackenzie who had first proposed that the Sierra Command come down out of the mountains, and who had exposed the gigantic fraud of Esperdom, and succeeded in playing down for his men the fact that behind the fraud lay a mystery one hardly dared think about. He would endure in the chronicles, that colonel, they would sing ballads about him for half a thousand years.

Only it didn't feel that way. James Mackenzie knew he was not much more than average bright under the best of conditions, now dull-minded with weariness and terrified of his daughter's fate. For himself he was haunted by the fear of certain crippling wounds. Often he had to drink himself to sleep. He was shaved, because an officer must maintain appearances, but realized very well that if he hadn't had an orderly to do the job for him he would be as shaggy as any buck private. His uniform was faded and threadbare, his body stank and itched, his mouth yearned for tobacco but there had been some trouble in the commissariat and they were lucky to eat. His achievements amounted to patchwork jobs carried out in utter confusion, or to slogging like this and wishing only for an end to the whole mess. One day, win or lose, his body would give out on him—he could feel the machinery wearing to pieces, arthritic twinges, shortness of breath, dozing off in the middle of things—and the termination of himself would be as undignified and lonely as that of every other human slob. Hero? What an all time laugh!

He yanked his mind back to the immediate situation. Behind him a core of the regiment accompanied the artillery along the beach, a thousand men with motorized gun carriages, caissons, mule-drawn wagons, a few trucks, one precious armored car. They were a dun mass topped with helmets, in loose formation, rifles or bows to hand.

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The sand deadened their footfalls, so that only the surf and the wind could be heard. But whenever the wind sank, Mackenzie caught the tune of the hex corps: a dozen leathery older men, mostly Indians, carrying the wands of power and whistling together the Song Against Witches. He took no stock in magic himself, yet when that sound came to him the skin crawled along his backbone.

Everything's in good order, he insisted. *We're doing fine.*

Then: *But Phil's right. This is a screwball business. The enemy should have fought through to a southward line of retreat, not let themselves be boxed.*

Captain Hulse galloped close. Sand spurted when he checked his horse. "Patrol report, sir."

"Well?" Mackenzie realized he had almost shouted. "Go ahead."

"Considerable activity observed about five miles northeast. Looks like a troop headed our way."

Mackenzie stiffened. "Haven't you anything more definite than that?"

"Not so far, with the ground so broken."

"Get some aerial reconnaissance there, for Pete's sake!"

"Yes, sir. I'll throw out more scouts, too."

"Carry on here, Phil." Mackenzie headed toward the radio truck. He carried a minicom in his saddlebag, of course, but San Francisco had been continuously jamming on all bands and you needed a powerful set to punch a signal even a few miles. Patrols must communicate by messenger.

He noticed that the firing inland had slacked off. There were decent roads in the interior Peninsula a ways further north, where some resettlement had taken place. The enemy, still in possession of that area, could use them to effect rapid movements.

If they withdrew their center and hit our flanks, where we're weakest—

A voice from field HQ, barely audible through the squeals and buzzes, took his report and gave back what had been seen elsewhere. Large maneuvers right and left, yes, it did seem as if the Fallonites were going to try a breakthrough. Could be a feint, though. The main body of the Sierrans must remain where it was until the situation became clearer. The Rolling Stones must hold out a while on their own.

"Will do." Mackenzie returned to the head of his columns. Speyer nodded grimly at the word.

"Better get prepared, hadn't we?"

"Uh-huh." Mackenzie lost himself in a welter of commands, as officer after officer rode to him. The outlying sections were to be pulled in. The beach was to be defended, with the high ground immediately above.

Men scurried, horses neighed,

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guns trundled about. The scout plane returned, flying low enough to get a transmission through: yes, definitely an attack on the way; hard to tell how big a force, through the damned tree cover and down in the damned arroyos, but it might well be at brigade strength.

Mackenzie established himself on a hilltop with his staff and runners. A line of artillery stretched beneath him, across the strand. Cavalry waited behind them, lances agleam, an infantry company for support. Otherwise the foot soldiers had faded into the landscape. The sea boomed its own cannonade, and gulls began to gather as if they knew there would be meat before long.

"Think we can hold them?" Speyer asked.

"Sure," Mackenzie said. "If they come down the beach, we'll enfilade them, as well as shooting up their front. If they come higher, well, that's a textbook example of defensible terrain. 'Course, if another troop punches through the lines further inland, we'll be cut off, but that isn't our worry right now."

"They must hope to get around our army and attack our rear."

"Guess so. Not too smart of them, though. We can approach Frisco just as easily fighting backwards as forwards."

"Unless the city garrison makes a sally."

"Even then. Total numerical strengths are about equal, and we've got more ammo and alky. Also a lot of bossman militia for auxiliaries, who're used to disorganized warfare in hilly ground."

"If we do whip them—" Speyer shut his lips together.

"Go on," Mackenzie said.

"Nothing."

"The hell it is. You were about to remind me of the next step: how do we take the city without too high a cost to both sides? Well, I happen to know we've got a hole card to play there, which might help."

Speyer turned pitying eyes away from Mackenzie. Silence fell on the hilltop.

It was an unconscionably long time before the enemy came in view, first a few outriders far down the dunes, then the body of him, pouring from the ridges and gullies and woods. Reports flickered about Mackenzie—a powerful force, nearly twice as big as ours, but with little artillery; by now badly short of fuel, they must depend far more than we on animals to move their equipment. They were evidently going to charge, accept losses in order to get sabers and bayonets among the Rolling Stones' cannon. Mackenzie issued his directions accordingly.

The hostiles formed up, a mile or so distant. Through his field glasses Mackenzie recognized them, red sashes of the Madera

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Horse, green and gold pennon of the Dagos, fluttering in the iodine wind. He'd campaigned with both outfits in the past. It was treacherous to remember that Ives favored a blunt wedge formation and use the fact against him. . . . One enemy armored car and some fieldpieces, light horse-drawn ones, gleamed wickedly in the sunlight.

Bugles blew shrill. The Fallonite cavalry laid lance in rest and started trotting. They gathered speed as they went, a canter, a gallop, until the earth trembled with them. Then their infantry got going, flanked by its guns. The car rolled along between the first and second line of foot. Oddly, it had no rocket launcher on top or repeater barrels thrust from the fire slits. Those were good troops, Mackenzie thought, advancing in close order with that ripple down the ranks which bespoke veterans. He hated what must happen.

His defense waited immobile on the sand. Fire crackled from the hillsides, where mortar squads and riflemen crouched. A rider toppled, a dogface clutched his belly and went to his knees, their companions behind moved forward to close the lines again. Mackenzie looked to his howitzers. Men stood tensed at sights and lanyards. Let the foe get well in range—There! Yamaguchi, mounted just rearward of the gunners, drew his saber and flashed the blade downward. Cannon bellowed. Fire spurted through smoke, sand gouted up, shrapnel sleeted over the charging force. At once the gun crews fell into the rhythm of reloading, relaying, refiring, the steady three rounds per minute which conserved barrels and broke armies. Horses screamed in their own tangled red guts. But not many had been hit. The Madera cavalry continued in full gallop. Their lead was so close now that Mackenzie's glasses picked out a face, red, feckled, a ranch boy turned trooper, his mouth stretched out of shape as he yelled.

The archers behind the defending cannon let go. Arrows whistled skyward, flight after flight, curved past the gulls and down again. Flame and smoke ran ragged in the wiry hill grass, out of the ragged-leaved live oak copses. Men pitched to the sand, many still hideously astir, like insects that had been stepped on. The fieldpieces on the enemy left flank halted, swiveled about, and spat return fire. Futile . . . but God, their officer had courage! Mackenzie saw the advancing lines waver. An attack by his own horse and foot, down the beach, ought to crumple them. "Get ready to move," he said into his minicom. He saw his men poise.

The oncoming armored car slewed to a halt. Something within it chattered, loud enough to hear through the explosions.

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A blue-white sheet ran over the nearest hill. Mackenzie shut half-blinded eyes. When he opened them again, he saw a grass fire through the crazy patterns of after-image. A Rolling Stone burst from cover, howling, his clothes ablaze. The man hit the sand and rolled over. That part of the beach lifted in one monster wave, crested twenty feet high, and smashed across the hill. The burning soldier vanished in the avalanche that buried his comrades.

"Psi blast!" someone screamed, thin and horrible, through chaos and ground-shudder. "The Espers —"

Unbelievably, a bugle sounded and the Sierran cavalry lunged forward. Past their own guns, on against the scattering opposition . . . and horses and riders rose into the air, tumbled in a giant's invisible whirligig, crashed bone-breakingly to earth again. The second rank of lancers broke. Mounts reared, pawed the air, wheeled and fled in every direction.

A terrible deep hum filled the sky. Mackenzie saw the world as if through a haze, as if his brain were being dashed back and forth between the walls of his skull. Another glare ran across the hills, higher this time, burning men alive.

"They'll wipe us out," Speyer called, a dim voice that rose and fell on the air tides. "They'll reform as we stampede—"

"No!" Mackenzie shouted. "The adepts must be in that car. Come on!"

Most of his horse had recoiled on their own artillery, one squealing, trampling wreck. The infantry stood rigid, but about to bolt. A glance thrown to his right showed Mackenzie how the enemy themselves were in confusion, this had been a terrifying surprise to them too, but as soon as they got over the shock they'd advance and there'd be nothing left to stop them. . . . It was as if another man spurred his mount. The animal fought, foam-flecked with panic. He slugged its head around, brutally, and dug in spurs. They rushed down the hill toward the guns.

He needed all his strength to halt the gelding before the cannon mouths. A man slumped dead by his piece, though there was no mark on him. Mackenzie jumped to the ground. His steed bolted.

He hadn't time to worry about that. Where was help? "Come here!" His yell was lost in the riot. But suddenly another man was beside him, Speyer, snatching up a shell and slamming it into the breach. Mackenzie squinted through the telescope, took a bearing by guess and feel. He could see the Esper car where it squatted among dead and hurt. At this distance it looked too small to have blackened acres.

Speyer helped him lay the

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howitzer. He jerked the lanyard. The gun roared and sprang. The shell burst a few yards short of target, sand spurted and metal fragments whined.

Speyer had the next one loaded. Mackenzie aimed and fired. Overshot this time, but not by much. The car rocked. Concussion might have hurt the Espers inside; at least, the psi blasts had stopped. But it was necessary to strike before the foe got organized again.

He ran toward his own regimental car. The door gaped, the crew had fled. He threw himself into the driver's seat. Speyer clanged the door shut and stuck his face in the hood of the rocket launcher periscope. Mackenzie raced the machine forward. The banner on its rooftop snapped in the wind.

Speyer aimed the launcher and pressed the firing button. The missile burned across intervening yards and exploded. The other car lurched on its wheels. A hole opened in its side.

If the boys will only rally and advance—Well, if they don't, I'm done for anyway. Mackenzie squealed to a stop, flung open the door and leaped out. Curled, blackened metal framed his entry. He wriggled through, into murk and stenches.

Two Espers lay there. The driver was dead, a chunk of steel through his breast. The other one, the adept, whimpered among his unhuman instruments. His face was hidden by blood. Mackenzie pitched the corpse on its side and pulled off the robe. He snatched a curving tube of metal and tumbled back out.

Speyer was still in the undamaged car, firing repeaters at those hostiles who ventured near. Mackenzie jumped onto the ladder of the disabled machine, climbed to its roof and stood erect. He waved the blue robe in one hand and the weapon he did not understand in the other. "Come on, you sons!" he shouted, tiny against the sea wind. "We've knocked 'em out for you! Want your breakfast in bed too?"

One bullet buzzed past his ear. Nothing else. Most of the enemy, horse and foot, stayed frozen. In that immense stillness he could not tell if he heard surf or the blood in his own veins.

Then a bugle called. The hex corps whistled triumphantly; their tomtoms thuttered. A ragged line of his infantry began to move toward him. More followed. The cavalry joined them, man by man and unit by unit, on their flanks. Soldiers ran down the smoking hillsides.

Mackenzie sprang to sand again and into his car. "Let's get back," he told Speyer. "We got a battle to finish."

"Shut up!" Tom Danielis said.

Philosopher Woodworth stared at him. Fog swirled and dripped in

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the forest, hiding the land and the brigade, gray nothingness through which came a muffled noise of men and horses and wheels, an isolated and infinitely weary sound. The air was cold, and clothing hung heavy on the skin.

"Sir," protested Major Lescarbault, eyes wide and shocked.

"I dare tell a ranking Esper to stop quacking about a subject of which he's totally ignorant?" Danielis answered. "Well, it's past time that somebody did."

Woodworth recovered his poise. "All I said, son, was that we should consolidate our adepts and strike the Brodskyite center," he reproved. "What's wrong with that?"

Danielis clenched his fists. "Nothing," he said, "except it invites a worse disaster than you've brought on us yet."

"A setback or two," Lescarbault argued. "They did rout us on the west, but we turned their flank here by the Bay."

"With the net result that their main body pivoted, attacked, and split us in half," Danielis snapped. "The Espers have been scant use since then . . . now the rebels know they need vehicles to transport their weapons, and can be killed. Artillery zeroes in on their positions, or bands of woodsmen hit and run, leaving them dead, or the enemy simply goes around any spot where they're known to be. We haven't got enough adepts!"

"That's why I proposed gettin' them in one group, too big to withstand," Woodworth said.

"And too cumbersome to be of any value," Danielis replied. He felt more than a little sickened, knowing how the Order had cheated him his whole life; yes, he thought, that was the real bitterness, not the fact that the adepts had failed to defeat the rebels—by failing, essentially, to break their spirit—but the fact that the adepts were only someone else's cat's paws and every gentle, earnest soul in every Esper community was only someone's dupe.

Wildly he wanted to return to Laura—there'd been no chance thus far to see her—Laura and the kid, the last honest reality this fog-world had left him. He mastered himself and went on more evenly:

"The adepts, what few of them survive, will of course be helpful in defending San Francisco. An army free to move around in the field can deal with them, one way or another, but your . . . your weapons can repel an assault on the city walls. So that's where I'm going to take them."

Probably the best he could do. There was no word from the northern half of the loyalist army. Doubtless they'd withdrawn to the capital, suffering heavy losses en route. Radio jamming continued, hampering friendly and hostile communications alike. He had to

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take action, either retreat southward or fight his way through to the city. The latter course seemed wisest. He didn't believe that Laura had much to do with his choice.

"I'm not adept myself," Woodworth said. "I can't call them mind to mind."

"You mean you can't use their equivalent of radio," Danielis said brutally. "Well, you've got an adept in attendance. Have him pass the word."

Woodworth flinched. "I hope," he said, "I hope you understand this came as a surprise to me too."

"Oh, yes, certainly, Philosopher," Lescarbault said unbidden.

Woodworth swallowed. "I still hold with the Way and the Order," he said harshly. "There's nothin' else I can do. Is there? The Grand Seeker has promised a full explanation when this is over." He shook his head. "Okay, son, I'll do what I can."

A certain compassion touched Danielis as the blue robe disappeared into the fog. He rapped his orders the more severely.

Slowly his command got going. He was with the Second Brigade; the rest were strewn over the Peninsula in the fragments into which the rebels had knocked them. He hoped the equally scattered adepts, joining him on his march through the San Bruno range, would guide some of those units to him. But most, wandering demoralized, were sure to surrender to the first rebels they came upon.

He rode near the front, on a muddy road that snaked over the highlands. His helmet was a monstrous weight. The horse stumbled beneath him, exhauted by—how many days?—of march, countermarch, battle, skirmish, thin rations or none, heat and cold and fear, in an empty land. Poor beast, he'd see that it got proper treatment when they reached the city. That all those poor beasts behind him did, after trudging and fighting and trudging again until their eyes were filmed with fatigue.

There'll be chance enough for rest in San Francisco. We're impregnable there, walls and cannon and the Esper machines to landward, the sea that feeds us at our backs. We can recover our strength, regroup our forces, bring fresh troops down from Washington and up from the south by water. The war isn't decided yet . . . God help us.

I wonder if it will ever be.

And then, will Jimbo Mackenzie come to see us, sit by the fire and swap yarns about what we did? Or talk about something else, anything else? If not, that's too high a price for victory.

Maybe not too high a price for what we've learned, though. Strangers on this planet . . . what else could have forged those weapons? The adepts will talk if I myself have to torture them till

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they do. But Danielis remembered tales muttered in the fisher huts of his boyhood, after dark, when ghosts walked in old men's minds. Before the holocaust there had been legends about the stars, and the legends lived on. He didn't know if he would be able to look again at the night sky without a shiver.

This damned fog—

Hoofs thudded. Danielis half drew his sidearm. But the rider was a scout of his own, who raised a drenched sleeve in salute. "Colonel, an enemy force about ten miles ahead by road. Big."

So we'll have to fight now. "Do they seem aware of us?"

"No, sir. They're proceeding east along the ridge there."

"Probably figure to occupy the Candlestick Park ruins," Danielis murmured. His body was too tired for excitement. "Good stronghold, that. Very well, corporal." He turned to Lescarbault and issued instructions.

The brigade formed itself in the formlessness for combat. Patrols went out. Information began to flow back, and Danielis sketched a plan that ought to work. He didn't want to try for a decisive engagement, only brush the enemy aside and discourage them from pursuit. His men hust be spared, as many as possible, for the city defense and the eventual counter-offensive.

Lescarbault came back. "Sir! The radio jamming's ended!"

"What?" Danielis blinked, not quite comprehending.

"Yes, sir. I've been using a minicom—" Lescarbault lifted the wrist on which his tiny transceiver was strapped— "for very short-range work, passing the battalion commanders their orders. The interference stopped a couple of minutes ago. Clear as daylight."

Danielis pulled the wrist toward his own mouth. "Hello, hello, radio wagon, this is the C.O. You read me?"

"Yes, sir," said the voice.

"They turned off the jammer in the city for a reason. Get me the open military band."

"Yes, sir." Pause, while men mumbled and water runneled unseen in the arroyos. A wraith smoked past Danielis' eyes. Drops coursed off his helmet and down his collar. The horse's mane hung sodden.

Like the scream of an insect:

"—here at once! Every unit in the field, get to San Francisco at once! We're under attack by sea!"

Danielis let go Lescarbault's arm. He stared into emptiness while the voice wailed on and forever on.

"—bombarding Potrero Point. Decks jammed with troops. They must figure to make a landing there—"

Danielis' mind raced ahead of the words. It was as if Esp were no lie, as if he scanned the beloved city himself and felt her wounds

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in his own flesh. There was no fog around the Cate, of course, or so detailed a description could not have been given. Well, probably some streamers of it rolled in under the rusted remnants of the bridge, themselves like snowbanks against blue-green water and brilliant sky. But most of the Bay stood open to the sun. On the opposite shore lifted the Eastbay hills, green with gardens and agleam with villas; and Marin shouldered heavenward across the strait, looking to the roofs and walls and heights that were San Francisco. The convoy had gone between the coast defenses that could have smashed it, an unusually large convoy and not on time: but still the familiar big-bellied hulls, white sails, occasional fuming stacks, that kept the city fed. There had been an explanation about trouble with commerce raiders; and the fleet was passed on into the Bay, where San Francisco had no walls. Then the gun covers were taken off and the holds vomited armed men.

Yes, they did seize a convoy, those piratical schooners. Used radio jamming of their own; together with ours, that choked off any cry of warning. They threw our supplies overboard and embarked the bossman militia. Some spy or traitor gave them the recognition signals. Now the capital lies open to them, her garrison stripped, hardly an adept left in Esper Central, the Sierrans thrusting against her southern gates, and Laura without me.

"We're coming!" Danielis yelled. His brigade groaned into speed behind him. They struck with a desperate ferocity that carried them deep into enemy positions and then stranded them in separated groups. It became knife and saber in the fog. But Danielis, because he led the charge, had already taken a grenade on his breast.

East and south, in the harbor district and at the wreck of the Peninsula wall, there was still some fighting. As he rode higher, Mackenzie saw how those parts were dimmed by smoke, which the wind scattered to show rubble that had been houses. The sound of firing drifted to him. But otherwise the city shone untouched, roofs and white walls in a web of streets, church spires raking the sky like masts, Federal House on Nob Hill and the Watchtower on Telegraph Hill as he remembered them from childhood visits. The Bay glittered insolently beautiful.

But he had no time for admiring the view, nor for wondering where Laura huddled. The attack on Twin Peaks must be swift, for surely Esper Central would defend itself.

On the avenue climbing the opposite side of those great humps, Speyer led half the Rolling Stones. (Yamaguchi lay dead on a pock-

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marked beach.) Mackenzie himself was taking this side. Horses clopped along Portola, between blankly shuttered mansions; guns trundled and creaked, boots knocked on pavement, moccasins slithered, weapons rattled, men breathed heavily and the hex corps whistled against unknown demons. But silence overwhelmed the noise, echoes trapped it and let it die. Mackenzie recollected nightmares when he fled down a corridor which had no end. *Even if they don't cut loose at us,* he thought bleakly, *we've got to seize their place before our nerve gives out.*

Twin Peaks Boulevard turned off Portola and wound steeply to the right. The houses ended; wild grasses alone covered the quasi-sacred hills, up to the tops where stood the buildings forbidden to all but adepts. Those two soaring, iridescent, fountainlike skyscrapers had been raised by night, within a matter of weeks. Something like a moan stirred at Mackenzie's back.

"Bugler, sound the advance. On the double!"

A child's jeering, the notes lifted and were lost. Sweat stung Mackenzie's eyes. If he failed and was killed, that didn't matter too much . . . after everything which had happened . . . but the regiment, the regiment—

Flame shot across the street, the color of hell. There went a hiss and a roar. The pavement lay trenched, molten, smoking and reeking. Mackenzie wrestled his horse to a standstill. *A warning only. But if they had enough adepts to handle us, would they bother trying to scare us off?* "Artillery, open fire!"

The field guns bellowed together, not only howitzers but motorized 75's taken along from Alemany Gate's emplacements. Shells went overhead with a locomotive sound. They burst on the walls above and the racket thundered back down the wind.

Mackenzie tensed himself for an Esper blast, but none came. Had they knocked out the final defensive post in their own first barrage? Smoke cleared from the heights and he saw that the colors which played in the tower were dead and that wounds gaped across loveliness, showing unbelievably thin framework. It was like seeing the bones of a woman murdered by his hand.

Quick, though! He issued a string of commands and led the horse and foot on. The battery stayed where it was, firing and firing with hysterical fury. The dry brown grass started to burn, as red-hot fragments scattered across the slope. Through mushroom bursts, Mackenzie saw the building crumble. Whole sheets of facing broke and fell to earth. The skeleton vibrated, took a direct hit and sang in metal agony.

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What was that which stood within?

There were no separate rooms, no floors, nothing but girders, enigmatic machines, here and there a globe still aglow like a minor sun. The structure had enclosed something nearly as tall as itself, a finned and shining column, almost like a rocket shell but impossibly huge and fair.

Their spaceship, Mackenzie thought in the clamor. *Yes, of course, the ancient had begun making spaceships, and we always figured we would again someday. This, though—!*

The archers lifted a tribal screech. The riflemen and cavalry took it up, crazy, jubilant, the howl of a beast of prey. By Satan, we've whipped the stars themselves! As they burst onto the hillcrest, the shelling stopped, and their yells overrode the wind. Smoke was acrid as blood smell in their nostrils.

A few dead blue-robes could be seen in the debris. Some half dozen survivors milled toward the ship. A bowman let fly. His arrow glanced off the landing gear but brought the Espers to a halt. Troopers poured over the shards to capture them.

Mackenzie reined in. Something that was not human lay crushed near a machine. Its blood was deep violet color. *When the people have seen this, that's the end of the Order.* He felt no triumph. At St. Helena he had come to appreciate how fundamentally good the believers were.

But this was no moment for regret, or for wondering how harsh the future would be with man taken entirely off the leash. The building on the other peak was still intact. He had to consolidate his position here, then help Phil if need be.

However, the minicom said, "Come on and join me, Jimbo. The fracas is over," before he had completed his task. As he rode alone toward Speyer's place, he saw a Pacific States flag flutter up the mast on that skyscraper's top.

Guards stood awed and nervous at the portal. Mackenzie dismounted and walked inside. The entry chamber was a soaring, shimmering fantasy of colors and arches, through which men moved troll-like. A corporal led him down a hall. Evidently this building had been used for quarters, offices, storage, and less understandable purposes. . . . There was a room whose door had been blown down with dynamite. The fluid abstract murals were stilled, scarred, and sooted. Four ragged troopers pointed guns at the two beings whom Speyer was questioning.

One slumped at something that might answer to a desk. The avian face was buried in seven-fingered hands and the ridumentary wings quivered with sobs. *Are they able to cry, then?* Mackenzie thought,

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astonished, and had a sudden wish to take the being in his arms and offer what comfort he was able.

The other one stood erect in a robe of woven metal. Great topaz eyes met Speyer's from a seven-foot height, and the voice turned accented English into music.

"—a G-type star some fifty light-years hence. It is barely visible to the naked eye, though not in this hemisphere."

The major's fleshless, bristly countenance jutted forward as if to peck. "When do you expect reinforcements?"

"There will be no other ship for almost a century, and it will only bring personnel. We are isolated by space and time; few can come to work here, to seek to build a bridge of minds across that gulf—"

"Yeah," Speyer nodded prosaically. "The light-speed limit. I thought so. If you're telling the truth."

The being shuddered. "Nothing is left for us but to speak truth, and pray that you will understand and help. Revenge, conquest, any form of mass violence is impossible when so much space and time lies between. Our labor has been done in the mind and heart. It is not too late, even now. The most crucial facts can still be kept hidden—oh, listen to me, for the sake of your unborn!"

Speyer nodded to Mackenzie. "Everything okay?" he said. "We got us a full bag here. About twenty left alive, this fellow the bossman. Seems like they're the only ones on Earth."

"We guessed there couldn't be many," the colonel said. His tone and his feelings were alike ashen. "When we talked it over, you and me, and tried to figure what our clues meant. They'd have to be few, or they'd've operated more openly."

"Listen, listen," the being pleaded. "We came in love. Our dream was to lead you—to make you lead yourselves—toward peace, fulfillment. . . . Oh, yes, we would also gain, gain yet another race with whom we could someday converse as brothers. But there are many races in the universe. It was chiefly for your own tortured sakes that we wished to guide your future."

"That controlled history notion isn't original with you," Speyer grunted. "We've invented it for ourselves, now and then on Earth. The last time it led to the Hell-bombs. No, thanks!"

"But we *know!* The Great Science predicts with absolute certainty—"

"Predicted this?" Speyer waved a hand at the blackened room.

"There are fluctuations. We are too few to control so many savages in every detail. But do you not wish an end to war, to all your ancient sufferings? I offer you that for your help today."

"You succeeded in starting a

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pretty nasty war yourselves," Speyer said.

The being twisted its fingers together. "That was an error. The plan remains, the only way to lead your people toward peace. I, who have traveled between suns, will get down before your boots and beg you—"

"Stay put!" Speyer flung back. "If you'd come openly, like honest folk, you'd have found some to listen to you: Maybe enough, even. But no, your do-gooding had to be subtle and crafty. You knew what was right for us. We weren't entitled to any say in the matter. God in heaven, I've never heard anything so arrogant!"

The being lifted its head. "Do you tell children the whole truth?"

"As much as they're ready for."

"Your child-culture is not ready to hear these truths."

"Who qualified you to call us children—besides yourselves?"

"How do you know you are adult?"

"By trying adult jobs and finding out if I can handle them. Sure, we make some ghastly blunders, we humans. But they're our own. And we learn from them. You're the ones who won't learn, you and that damned psychological science you were bragging about, that wants to fit every living mind into the one frame it can understand.

"You wanted to re-establish the centralized state, didn't you? Did you ever stop to think that maybe feudalism is what suits man? Some one place to call our own, and belong to, and be part of; a community with traditions and honor; a chance for the individual to make decisions that count; a bulwark for liberty against the central overlords, who'll always want more and more power; a thousand different ways to live. We've always built super-countries, here on Earth, and we've always knocked them apart again. I think maybe the whole idea is wrong. And maybe this time we'll try something better. Why not a world of little states, too well rooted to dissolve in a nation, too small to do much harm—slowly rising above petty jealousies and spite, but keeping their identities—a thousand separate approaches to our problems. Maybe then we can solve a few of them . . . for ourselves!"

"You will never do so," the being said. "You will be torn in pieces all over again."

"That's what you think. I think otherwise. But whichever is right—and I bet this is too big a universe for either of us to predict—we'll have made a free choice on Earth. I'd rather be dead than domesticated.

"The people are going to learn about you as soon as Judge Brodsky's been reinstated. No, sooner. The regiment will hear today, the city tomorrow, just to make sure no

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one gets ideas about suppressing the truth again. By the time your next spaceship comes, we'll be ready for it: in our own way, whatever that is."

The being drew a fold of robe about its head. Speyer turned to Mackenzie. His face was wet. "Anything . . . you want to say . . . Jimbo?"

"No," Mackenzie mumbled. "Can't think of anything. Let's get our command organized here. I don't expect we'll have to fight any more, though. It seems to be about ended down there."

"Sure." Speyer drew an uneven breath. "The enemy troops elsewhere are bound to capitulate. They've got nothing left to fight for."

There was a house with a patio whose wall was covered by roses. The street outside had not yet come back to life, so that silence dwelt here under the yellow sunset. A maidservant showed Mackenzie through the back door and departed. He walked toward Laura, who sat on a bench beneath a willow. She watched him approach but did not rise. One hand rested on a cradle.

He stopped and knew not what to say. How thin she was!

Presently she told him, so low he could scarcely hear: "Tom's dead."

"Oh, no." Darkness came and went before his eyes.

"I learned the day before yesterday, when a few of his men straggled home. He was killed in the San Bruno."

Mackenzie did not dare join her, but his legs would not upbear him. He sat down on the flagstones and saw curious patterns in their arrangement. There was nothing else to look at.

Her voice ran on above him, toneless: "Was it worth it? Not only Tom, but so many others, killed for a point of politics?"

"More than that was at stake," he said.

"Yes, I heard on the radio. I still can't understand how it was worth it. I've tried very hard, but I can't."

He had no strength left to defend himself. "Maybe your're right, duck. I wouldn't know."

"I'm not sorry for myself," she said. "I still have Jimmy. But Tom was cheated out of so much."

He realized all at once that there was a baby, and he ought to take his grandchild to him and think thoughts about life going on into the future. But he was too empty.

"Tom wanted him named after you," she said.

Did you, Laura? he wondered. Aloud: "What are you going to do now?"

"I'll find something."

He made himself glance at her. The sunset burned on the willow leaves above and on her face, which was now turned toward the

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infant he could not see. "Come back to Nakamura," he said.

"No. Anywhere else."

"You always loved the mountains," he groped. "We—"

"No." She met his eyes. "It isn't you, Dad. Never you. But Jimmy is not going to grow up a soldier." She hesitated. "I'm sure some of the Espers will keep going, on a new basis, but with the same goals. I think we should join them. He ought to believe in something different from what killed his father, and work for it to become real. Don't you agree?"

Mackenzie climbed to his feet against Earth's hard pull. "I don't know," he said. "Never was a thinker. . . . Can I see him?"

"Oh, Dad—"

He went over and looked down at the small sleeping form. "If you marry again," he said, "and have a daughter, would you call her for her mother?" He saw Laura's head bend downward and her hands clench. Quickly he said, "I'll *go* now. I'd like to visit you some more, tomorrow or sometime, if you think you'll want to have me."

Then she came to his arms and wept. He stroked her hair and murmured, as he had done when she was a child. "You do want to return to the mountains, don't you? They're your country too, your people, where you belong."

"Y-you'll never know how much I want to."

"Then why not?" he cried.

His daughter straightened herself. "I can't," she said. "Your war is ended. Mine has just begun."

Because he had trained that will, he could only say, "I hope you win it."

"Perhaps in a thousand years—" She could not continue.

Night had fallen when he left her. Power was still out in the city, so the street lamps were dark and the stars stood forth above all roofs. The squad that waited to accompany their colonel to barracks looked wolfish by lantern light. They saluted him and rode at his back, rifles ready for trouble; but there was only the iron sound of horsehoes.

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BOOKS

THE MAN IN THE HIGH CASTLE, Philip K. Dick, Putnam, $3.95

This is a remarkable book. Just how remarkable it is is little suggested by the basic premise, which is that the United States lost the Second World War. Other writers, such as Budrys and Kornbluth, have based stories on this notion, but in neither case was the story one of their best. If Mr. Dick ever writes anything better than this (indeed, if he ever writes anything else as good), he deserves to take his place among the foremost in the field; how he has escaped my notice until now, I own to you I do not know. I don't think he will elude me again.

The United States of America lost the Second World War. The United States of America now occupies less territory than it did prior to the Mexican War; and is a puppet of Nazi Germany. The Pacific States of America go the way Imperial Japan wants them to go. And in between, poor but more-or-less free, are the Rocky Mountain States. Some of the action takes place there; most of it in the PSA . . . Underground? *What* underground? There was (in our time continuum) one against the Germans and the Japanese, but that was while the war was still on; there was none afterwards—and there is none in this post-war America, either. Had Mr. Dick posited one, he would have had another bam pow Tonight We-Liberate-Chicago adventure story: he has been too clever to fall into that trap. Given even a slight opportunity, people—if completely conquered—tend to admire their conquerors, and then, logically enough, to emulate them. I cannot sufficiently praise the dexterous way in which he shows that process; for example, in the relationship between R. Childan, owner of Artistic American Handicrafts, Inc.—his good customer, Mr. Tagomi, official of the Japanese Trade Mission (the de facto rulers of the PSA)—and Mr. and Mrs. Kasoura, a young couple here on a sort of Nipponese Point Four Program. It may seem easy enough to reverse what happened to and in Japan vis-a-vis the Americans after 1945; to do it at all might be

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easy, but Mr. Dick has done it *well.* Which is quite another thing.

". . . the gum-chewing boorish [Japanese] draftees with their greedy peasant faces, wandering up Market Street, gaping at the bawdy shows, the sex movies, the shooting galleries, the cheap nightclubs with photos of middle-aged blondes holding their nipples between their wrinkled fingers and leering . . . the honky-tonk jazz slums that made up most of the flat part of San Francisco, rickety tin and board shacks that had sprung up from the ruins even before the last bomb fell. [. . .] 'I could arrange to arrive at your apartment, yes,' Childan said. 'Bringing several hand cases, I can suggest in context, at your leisure. This, of course, is our specialty.' He dropped his eyes so as to conceal his hope. There might be thousands of dollars involved. 'I am getting in a New England table, maple, all wood-pegged, no nails. Immense beauty and worth. And a mirror from the time of the 1812 War. And also the aboriginal art: a group of vegetable-dyed goat-hair rugs.'" I don't know, I may not be picking the right passage with this last quote; but—time after time Mr. Dick clearly shows his Americans either speaking imperfectly in Japanese or attempting to speak English like Japanese—but he never says that this is what he is doing; sometimes he has them *thinking* like Japanese, with dreadful concern over face and manners. Well. Perhaps a minor point, and I don't want to get hung up on it. But it's very effective.

There is Tagomi; Tagomi is awaiting Mr. Baynes, a Swedish businessman who is deeply interested in something more than Sweden and business; there is Frank Frink, a master craftsman and a war veteran who has not only forgiven his conquerors, he is thankful for them—Frink is a Jew, it is death to be a Jew nowadays in the USA, but in the PSA "these civilized bandy-legged little shrimps . . . would no more set up gas ovens than they would melt their wives into sealing wax." (The Japanese are still consolidating the Co-Prosperity Sphere; the Germans are moving into outer space; there are no more Russians to speak of.) Frank's ex-wife, Juliana, is wandering through the RMS with a strange, intent foreigner who talks endlessly of the glories of Fascism. Everybody is reading and talking about a book called *The Grasshopper Lies Heavy,* by Hawthorne Abendsen, who lives in a house—the High Castle—protected by barbed wire and machine-guns; the reason? *Grasshopper* dares to depict a world in which the Allied, and not the Axis Powers, won the Second World War. Juliana and her escort are looking for him.

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But Abendsen is not the principal personality of Mr. Dick's book, nor is Childan, Tagomi, Baynes, Frank, nor Juliana. The principal personality is the millennia-old *I Ching*, the Book of Changes, an oracular work—Tagomi uses it, Frank uses it, so does Juliana; and her search for Abendsen is based partly on her conviction that he uses it, too. In calling this venerable Chinese work "a personality" I have been preceded, I find, by the late C. G. Jung, and from his preface to the translation* continually referred to by Mr. Dick I quote the following: "For more than thirty years [written in 1949] I have interested myself in this oracle technique, or method of exploring the unconscious . . . I was already fairly familiar with the *I Ching* [. . .] to see the *I Ching* at work . . . I personified the book in a sense . . ." And he goes into details of his consulting the oracle, and his conviction that its replies were correct. A *steady* appeal to it has to be based on belief in chance and the suprasignificant configurations of the moment; it is opposed to causality. It has always seemed to me that Leninism and Psychoanalysis were alike in denying causality; Jung says here that "The axioms of causality are being shaken to their foundations" by modern physics. Just what Mr. Dick intends to imply or declare about the nature of the present by his use of the Book of Changes, I do not know. But whatever it may be, the effect is fascinating. As is, of course, the whole book. It's all here—extrapolation, suspense, action, art, philosophy, plot, character: really, a superior work of fiction. Don't take it out of the library—*buy* it!

MARCH OF THE ROBOTS, Gary Jennings, Dial, $2.95

Contents of this children's book are summed up in the subtitle, *From The Mannikins Of Antiquity To The Space Robots Of Tomorrow*. It contains some bits of information not generally met with elsewhere—such as the description of "The Unkillable Man" of Hero of Alexandria—which might engage the attention of the adult purchaser briefly before passing it on to the recipient. Illustrations.

THE PLANETS, Patrick Moore, Norton, $5.95

Did you know that Venus is sometimes so bright that it can cast a shadow, just like the sun and the moon? Have you ever heard of the "bright caps at the horns or cups of Venus"? They may be elevations above the perpetual cloud-

* *The I Ching or Book of Changes / The Richard Wilhelm Translation / Rendered Into English By Cary F. Baynes [!], London, Routeledge & Kegan Paul. Mr. Dick used the Pantheon-Bollingen edition, New York, of the same text.*

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bank, or polar frosts, or atmospheric phenomena, or just contrast effects. Were you aware that Lowell, who "saw" all those "canals" on Mars, also spent twenty-four years carefully charting markings on the Cytherean* surface which —it now appears—were never there? Had it occurred to you that Mercury is not only the hottest planet, but also the coldest? I select a tiny sprinkling of interesting items from this interesting book. I note that the Nebular Hypothesis is Out, the Tidal Theories of the Semi-Colliding Suns is Out, the Exploding Binary Explanation is Out . . . but not so far out as the others; the Magnetic Forces—Solar Cloud Theory is coming In. Moore cheers us with the info that the sun will not just peter out and freeze us, as we used to believe: No, instead, it will first flare up and incinerate us. Vulcan, the so-called Trans-Mercurian planet, *n'existe pas* . . . a shame; it will be missed, though who needs it? Avram, you sentimental fool. The book contains Antoniadi's standard chart of Mercury, which I'd never seen before, including the fascinatingly-named *Solitude of Hermes Trismegistus*. Lots of pictures.

TIME WAITS FOR WINTHROP, Frederik Pohl, ed., Doubleday, $3.95

"And Four Other Short Novels From GALAXY," is the subtitle. The title short novel is by William Tenn, and shows him at very good advantage, too—until the conclusion. Five people from our time are on a tourist-trip five centuries into the future; counterweight, so to speak, are five people from the Twenty-Fifth Century, of the exact same temporal and physical measurements, who are visiting *us*. In order for the re-exchange to take place, all ten people must be on hand at the time appointed. Four of our folks are ready, eager, to go back. Only Winthrop isn't ready. He *likes* it in the Future, doesn't care if his refusal to return strands the others; and, according to 25th C. law, he can't be forced. Mr. Tenn's wit and style (he is particularly good on the relationship between the pin-headed but sexy girl and her brief-time beau) keep us amused and wondering how the problem is to be solved. I doubt if he himself had any idea when he started the story, and I'd venture that the then-editor of GALAXY called him once too often about the deadline. At any rate, the end is a disappointment. *To Marry Medusa* is, like his perhaps more famous *More Than Human,* Theodore Sturgeon's inquiry into the possibility of collective inter-identity—if everybody had everybody else's knowledge. An inter-galactic mass-mind attempts to join up the mass-mind of Earth —and succeeds, though not as

* *Moore is dissatisfied with both "Venusian" and "Venerian" as adjectives; uses "Cytherean"—from another of Aphrodites's names, instead.*

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they-it expected. Damon Knight's *Natural State* is about the Downfall of The Cities, and the Triumph of the Outlanders, here called "Muckfeet," who triumph because they have succeeded in joining organic and inorganic lifeforms. Messrs. Sturgeon and Knight, like Mr. Tenn, can carry me with them almost anywhere they want to go on sheer writing alone. Isaac Asimov, however, in this instance, at any rate, not so. His *Galley Slave* (the incurable punstering Doctor has a proofreading robot for hero) is a story depending chiefly on its *ideas*. They are, that those who fear robots will destroy creativity cannot destroy robotics by employing the (famous and Asimovian) Three Laws of Robotics against it. The story is utterly logical, utterly natural—and leaves me, though not cold, cool. And the *fifth* short novel I found unreadable. So—score: three A's, one B, and one D-minus—and I am not, either, "hostile to ideas." So there.

KINGDOM OF THE OCTOPUS, **Frank W. Lane**, Pyramid, 75¢

I think it was R. W. Coulson who remarked that this book almost told him more about octopuses than he cared to know. It is certainly copious, dealing as well with squids and other cephalopods. They are the most intelligent of the molluscs, inveterate cannibals, build "houses" for themselves; their ink not only acts as a smokescreen but forms a phantom-shape of the creatures themselves to distract pursuers and seems to paralyze attackers' sense of smell—essential to the chase; the ink is so durable that even in fossil-form it can still be used for writing. They travel by jet-propulsion. Their eyes are incredibly alike to man's. "At the bottom of the sea," says one observer, "an octopus is like a tiger in the jungle." They can be hypnotized. Some are luminescent, by virtue of symbiotic bacteria. Their mating habits (described by Aristotle with surprising accuracy) are weird and often nasty. They can be lured by playing on the noseflute or the ocarina, have most definitely attacked and killed men, and "there are rare giant cephalopods which have sunk small boats." There is an account of "that calm summer evening in the Bay of Bengal [when] the schooner *Pearl* was sunk by a gigantic kraken." A fascinating book, with lots of anecdotes and illustrations.

MYTHS OF THE HERO, **Norma Lorre Goodrich**, Orion, $12.50

"Say what you will about Freud," I once observed to a young woman with black hair and shining eyes (who was at that moment saying nothing whatsoever about Freud); "he has considerably enriched our mythology." This particular and

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rather stuffy comment got but nowhere at all. It later developed that to her; as to many, many other people, "mythology" was something patented by Professor Bullfinch, and had no other connotations. This book by Mrs. Goodrich does not delve too deeply into the combinations and permutations possible to the subject, but then the subject has possibly been over-delved into. Her chapters are fourteen in number, seven ancient—Gilgamesh the Wrestler; Horus the Hawk, the Avenger; The House of Crete, King Minos II, Theseus and the Minotaur; Cassandra; The Coming of Rustum; Rustum and Kai-Kaus, Rustum and Suhrab; Rama and the Monkeys; The Wanderings of Aeneas, and The War in Italy—and seven medieval: three Beowulf episodes; Peredur, Son of York and The Valley Round; three parts of the Roland Cycle; Berta of Hungary; Sifrit of Austria; Prince Igor, and The Host of Prince Igor; and The Cid. A mixed bag, and rich enough to do. Consider just one of the Heroes, Peredur. His tale seemingly links up ancient Indo-European elements with Isis and Osiris, Ishtar with the Arthurian cycle, the Druids with the Knights Templar, Adonis and Tammuz with Sir Percival and Parzifal, Irish folk-lore with Cervantes and the modern Samuel Beckett—even, as Mrs. Goodrich cautiously suggests, perhaps with Jesus. Her prose is not of the most limpid, but the subject matter and Nicolay Nikolenko's 105 good illustrations help out a great deal. "The myth," says the author, ". . . is a branch of literature which is, like all great art, only a waking dream."

—AVRAM DAVIDSON

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This story has proven both a pleasure and a sorrow to us—a pleasure because of its fresh approach to a theme which has gone stale in the hands of more than one other author, and a sorrow because we cannot tell you anything about the man who wrote it. All we have been able to learn is that Con Pederson once lived at 117 North Reno Street, Los Angeles, California; gave this story to Forest J. Ackerman (Mr. Science Fiction) six years ago, to be agented by him; and then proceeded to vanish from that gentleman's ken. If anyone knows where he is—or even where he might be—please try and get this message to him: ☛ Con Pederson: Forest J. Ackerman has a check for you; F&SF would like more stories!

PUSHOVER PLANET

by Con Pederson

POTTER & FINCH CAME DOWN in a flash of steam and smoke, the forward rockets howling.

"Hot dog," yelled Finch. "A veritable ball."

Careful to favor the leg that had gone to sleep, Potter bounced up and down tentatively as soon as the side-irons had dropped from their chairs.

"Not a bad landing, I'd say," Finch beamed, defrosting some of the windows. "Laurels for the pilot. Say, what do you think?"

"Um," mused Potter, getting the feel of weight. "Littler than earth again. I haven't been on the right side of my skull for eighteen light years."

"The lung's good, Osk," reported Finch, examining the atmospherometer. "Pressure's ten point seven. It gives summer suits."

"Fine," yawned Potter, stretching in the new gravity.

"I'm for looking down. The mist is cleared off now."

Finch proceeded with his periscope, jiggling the horizon and sweeping it to the ground eighty yards below.

"Brick or lava?"

"This is too good. A sort of grass, I'd say. Small trees—oh,

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maybe thirty feet high. Find some life, will you Oscar?"

"Hang on, Dan. What's the milliroentgen count?"

"Poo—this is a slow atmosphere. We can travel without lead shield—cosmic radiation is nearly naught."

Potter moved to an array of extension controls, and set to work sticking pins in the planet.

"That's nice. I've just found flea-level carbon."

Finch grinned. "Critters, huh? Osk, this looks like South Heaven. I can't wait to get into the white meat out there."

"Well, don't get too eager. The last time we found a gold mine like this we ran into a minor plague."

"That was a fluke. You aren't getting anti-statistic in your old age, I hope. Just imagine the untouched uranium ore out there, and the platinum just waiting to be lapped up by an airjeep." Finch's eyes glittered.

Potter scratched his head, once more scanning the carbon clock.

"All right, then. Let's put out the dumbwaiter."

Things clicked and whirred for a bit as the elevator ran down the outside of the hull, bounced gently as it touched a rock, and settled in the cool grass.

"This planet reminds me of Berg 53," said Potter, watching out the window as mechanical ground runners rolled from the elevator to scurry out and hunt for samples.

"Yeah—except you can't see mountains here. Just hills. There must be running liquid out there, eroding them down. That means paydirt in the streams."

Potter checked the time and started the elevator up again. With a steady buzz it climbed to the outer port and they heard the locks working as it entered. Then the inner door swung open to admit the car.

Out stepped an animal that walked erect like a small kangaroo.

"hello" it telepathed.

"What the devil!" shouted Finch.

"Be careful!" warned Potter, reaching for a weapon. "It might be dangerous!"

The animal stopped and looked at them. Potter and Finch felt their minds glow with the creature's message of greeting.

"It *esps!*" exclaimed Finch. "What do you know about that?"

"N-next to nothing," stammered Potter.

"so wonderful you" came the creature's vibration, and the two men were washed in a nerve-bath of extreme pleasure.

"Hey—cut that stuff out!" protested Finch, leaping back and blinking wildly.

"friends to you love" the little animal answered.

"Intelligent life, Dan! And

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think of it—the third example of telepathy in history!"

"It looks like a wallaby, doesn't it? Except it's white. And damn it, will you look at that nasal twitch—just like a bunny!"

"wonderful friends . have" washed over the men again, as the little creature bobbed around like a puppy with a thorn pulled.

"I wonder what kind of organization this means," Potter said. "This telepathy is fabulous. Sort of communicates without saying anything."

"It seems to want—"

"friends keep"

"You see? 'Friends.' Maybe we've stumbled into some sort of altruism."

"Naw," said Finch. "It's just telling us 'welcome'. But you have to admit he sure means it."

They shivered as the animal continued to bathe them in emotion. Such uncontrolled joy was hard to cope with, coming from this non-human little creature.

"we friends love"

"No, Dan—I think it's more personal than that."

It affirmed with a renewed blast of affection.

"You're right—it's like a faithful hound. Why, we must have found a planet of pets!"

"Too high level for pets. This is a complex being. It must have a civilization . . ."

"all we here together love"

"That's it!" said Finch.

"many us many kinds love"

". . . Hear that picture?" asked Potter. "It looks . . . sounds . . . like a planet of many different species . . . They all form affinities between pairs. It must be like a zoo on earth, with all the animals *en rapport*, and mating telepathically. Only instead of two sexes, here there are dozens . . ."

"I wonder how they propagate!"

"Strictly an academic question. I'll let you worry about it."

Finch bent down and stroked the creature's fur. It glowed.

"Say, what a break for Potter & Finch, Planet Exploiters First Class! We can get these lovable little fellows to help us locate paydirt."

"I suppose so. Seems a little despicable, though."

"Oh, can it. If you had scruples you'd never have financed this tub in the first place. You know you'll get your eighty billion back, if we hit just one more strike."

"I'd feel more at home with a patch on one eye and a cutlass."

"i leave tell home"

"Sure—sure," said Finch. "Run on back and tell your pals. Tell them we're friends. We're everybody's friends.

"NO"

"Ow!" Finch recoiled.

"Don't you get it? We're strictly *his*, like a girl with her first boy friend. He's latched onto us for

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one of those strange alliances he telepathed us about. I don't know what it means, but it's all his."

"Okay, let him go home and boast. But he better come back."

"come tomorrow friends"

As the creature left they again felt that surge of adoration through their minds. It left them a little self-conscious.

"What a deal!" said Finch, lowering the elevator.

"We'd better get some sleep," Potter said, for they had been awake since first sighting the planet. "We can worry about Happy and his friends in the morning."

The next day Potter & Finch were buzzed out of bed at dawn and they set to work on breakfast.

"As soon as this run is over, we'll have our hold full of enough raw money to buy another ship, Osk," said Finch, hacking at an egg.

"Yes, but don't forget they've been cracking down on exploiters. It will probably be illegal when we get back. We may take a loss on uranium, even."

"With thirteen hundred tons downstairs already? That's twenty per cent stuff, Osk."

Potter knew that. But he remembered a fuel bill of seven billion dollars. It had taken three hundred tons of eighty per cent uranium just to get through the space barrier. And the solar system was still ten light years away.

"We may have to convert some of that cargo to get home, Dan. So don't count on too much profit."

Finch gulped his coffee. "Don't worry. Platinum is still high. And we can't burn *that*."

They stood up and began to shift into space suits, in order to reconnoiter the area. Plans had to be made for setting the automatic diggers to work sucking out paydirt and hauling it to the ship, and they had yet to find ore itself.

On came the suits-lugs bolted tight, limbs sealed in compartments, mechanical fingers tested, polarized headmounts fastened, oxygen tanks saddled, nitrogen content adjusted, thermostats set, a little experimental puff of vapor . . .

"All set?" radioed Finch.

"Mphh," answered Potter, cinching his midsection and altering the volume of his transmitter.

They went awkwardly down the elevator and walked out on the planet, thankful now for its slighter gravity. Above them was brilliant sky, before them rolling forests with the sound of water moving in great torrents somewhere in the hinterland.

"A tropical paradise," said Potter, awed.

"Let's strike out this way, Osk. We should find a stream. Listen —I can hear the counters chugging now!"

They set off through the trees. Lianas hung down from the weird,

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moss-covered limbs. Everything was encrusted with dried foam, a foam stained many bright colors by juice from millions of overripe fruits in the mesh of branches above. Upward was a white lace of growing limbs, while the ground was a yielding spongy moss interspersed with purple grass that sometimes grew long, flower-tipped spires.

Ground animals scurried before them, and many strange insects flew everywhere. It was a thrill to Oscar Potter to walk through vegetation centers on new planets, but there was a sameness to all of them. Always they were a confused sprawl of varied growths.

"Here's a stream," called Finch.

"What is it?"

"Seems like ordinary water, even to the calcium and iron. Lot of radiation."

"Okay. Let's check upstream. We'll soon have to get back and see about Happy and his cousins."

"Gladly. There's a fortune here, Osk. It means more than one trip. Earth'll be our oyster. We'll have more out of this than we can dream of together the rest of our lives."

Luti bounded along the narrow trail toward the ship. His heart was light, and he glowed with a radiance that only the bonded faytas exhibited. In his species great joy had been exuded when he described his new affinities. Such huge beings he had found —and by fayta law he had a whole month to choose the one with which to form a bond!

The ship was before him now, its elevator waiting. His friends would be glad to see him. They were receptive to his mind energy, and that fulfilled in him the purpose of all faytas.

From the jungle came a snapping sound, and Luti jumped back. Immediately his mind energy leaped out for his friends. He must protect them until bond was formed, according to the rules of fayta. But his mind energy could not find his friends. They must be asleep!

Then, from the trees, stepped two huge metal creatures that stalked toward the ship. They plodded menacingly, and their purple crests emanated a sharp mind energy that hurt Luti's thinking.

Luti saw their metal hides, and the great metal bowls on their backs. Again he felt their energy, and it was hostile, enemy, painful in frequency. His friends were endangered! These horrible monsters were coming to harm his friends!

Springing to the elevator, he turned and faced them. Fayta training and the bond code told him what he must do.

His energy leaped out in a wave of searing heat, and the ground beneath the oncoming

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monsters rippled and melted. One raised its arm for an instant, then they vanished.

Luti bounded up the elevator slide and entered the cabin, to see if his friends had been harmed by the mind waves of the monsters.

Not finding them, he sat down by the table and sniffed the empty coffee cups. They must have gone for a walk, he thought. They will be back.

STARLESQUE

The strippers were all mimicans, of course,
from Vega, according to the glam sell
in the lobby, but mostly flab non gell
types whose guise was pendulous and, worse,
only quasi-human. At the going price,
what could you expect? After the long spiel,
we settled back for laughs to watch them peel,
half hoping, this time, to see beneath the farce.

Grasping a fold of skin above the ribs,
the mim unwound, disclosing rib cage, heart
and lungs, going through the whole sorry routine
until the skeleton was up for grabs.
We squinted through the bone heap's blue contortions, vainly seeking a naked hint of brain.

—Walter H. Kerr

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Introduction to Jack Vance's GREEN MAGIC

Among the pleasures and treasures of the past calendar year we include our discovery of Jack Vance. True, others discovered him before us, discovered him to us. We would not have it otherwise—bad enough it unaccountably took this long for us, good that others have been enjoying him whilst we remained in ignorance. The preference of a Mrs. Grania Davidson for California as the scene of her slightly delayed honeymoon enabled us to meet the pleasant Mr. Vance, pleasant wife and pleasant boy-child; and to obtain this story from him. Vances span the state in space and time: one great-great-grandfather arriving 11 years before the Gold Rush; Jack born in San Francisco, raised in the San Joaquin-Sacramento Delta, high-schooled in Los Angeles, attended U. of C.—picked fruit, hopped bells, canned, mined, constructed, rigged, fared at sea, played jazz band cornet—lives in an old house in the Oakland Hills, defies storms and tempests in building the famous houseboat with Frank Herbert and Poul Anderson . . . None of which explains the talent behind his writing. At its simplest, you have in this story the man who dwelt in Fairyland—minus any trace of saccharinity which that might imply—plus a sophistication and a polish hard to parallel. We would like to know more about merrihews, sandestins, *and* magners, *creatures benign and malign, which Jack Vance merely mentions in passing. We would like to know more about the Egg of Innocence, which Harold Fair broke open, disturbing among the spiral towers. But it may be just as well that we do not. Jack Vance, he who is not content with magics merely white or black, says he is in favor of ". . . feasting and festivity, sailing, ceramics, books, Scotch, Bourbon, beer, gin and wine" and is against ". . . modern architecture, psychiatry, confusion, Picasso, Muzak, progressives and reactionaries, tobacco, sin and corruption." so be it.*

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GREEN MAGIC

by Jack Vance

HOWARD FAIR, LOOKING OVER the relics of his great uncle Gerald McIntyre, found a large ledger entitled:

WORKBOOK & JOURNAL
Open at Peril!

Fair read the journal with interest, although his own work went far beyond ideas treated only gingerly by Gerald McIntyre.

"The existence of disciplines concentric to the elementary magics must now be admitted without further controversy," wrote McIntyre. "Guided by a set of analogies from the white and black magics (to be detailed in due course), I have delineated the basic extension of purple magic, as well as its corollary, Dynamic Nomism."

Fair read on, remarking the careful charts, the projections and expansions, the transpolations and transformations by which Gerald McIntyre had conceived his systemology. So swiftly had the technical arts advanced that McIntyre's expositions, highly controversial sixty years before, now seemed pedantic and overly rigorous.

"Whereas benign creatures: angels, white sprites, merrihews, sandestins—are typical of the white cycle; whereas demons, magners, trolls and warlocks are evinced by black magic; so do the purple and green cycles sponsor their own particulars, but these are neither good nor evil, bearing, rather, the same relation to the black and white provinces that these latter do to our own basic realm."

Fair re-read the passage. The "green cycle?" Had Gerald McIntyre wandered into regions overlooked by modern workers?

He reviewed the journal in the light of this suspicion, and discovered additional hints and references. Especially provocative was a bit of scribbled marginalia: "More concerning my latest researches I may not state, having been promised an infinite reward for this forbearance."

The passage was dated a day before Gerald McIntyre's death, which had occurred on March 21, 1898, the first day of spring. McIntyre had enjoyed very little of his "infinite reward," whatever had been its nature . . . Fair returned to a consideration of the journal,

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which, in a sentence or two, had opened a chink on an entire new panorama. McIntyre provided no further illumination, and Fair set out to make a fuller investigation.

His first steps were routine. He performed two divinations, searched the standard indexes, concordances, handbooks and formularies, evoked a demon whom he had previously found knowledgeable: all without success. He found no direct reference to cycles beyond the purple; the demon refused even to speculate.

Fair was by no means discouraged; if anything, the intensity of his interest increased. He re-read the journal, with particular care to the justification for purple magic, reasoning that McIntyre, groping for a lore beyond the purple, might well have used the methods which had yielded results before. Applying stains and ultraviolet light to the pages, Fair made legible a number of notes McIntyre had jotted down, then erased.

Fair was immensely stimulated. The notes assured him that he was on the right track, and further indicated a number of blind alleys which Fair profited by avoiding. He applied himself so successfully that before the week was out he had evoked a sprite of the green cycle.

It appeared in the semblance of a man with green glass eyes and a thatch of young eucalyptus leaves in the place of hair. It greeted Fair with cool courtesy, would not seat itself, and ignored Fair's proffer of coffee.

After wandering around the apartment inspecting Fair's books and curios with an air of negligent amusement, it agreed to respond to Fair's questions.

Fair asked permission to use his tape-recorder, which the sprite allowed, and Fair set the apparatus in motion. (When subsequently he replayed the interview, no sound could be heard.)

"What realms of magic lie beyond the green?" asked Fair.

"I can't give you an exact answer," replied the sprite, "because I don't know. There are at least two more, corresponding to the colors we call rawn and pallow, and very likely others."

Fair arranged the microphone where it would more directly intercept the voice of the sprite.

"What," he asked, "is the green cycle like? What is its physical semblance?"

The sprite paused to consider. Glistening mother-of-pearl films wandered across its face, reflecting the tinge of its thoughts. "I'm rather severely restricted by your use of the word 'physical.' And 'semblance' involves a subjective interpretation, which changes with the rise and fall of the seconds."

"By all means," Fair said hastily, "describe it in your own words."

"Well—we have four different

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regions, two of which florescé from the basic skeleton of the universe, and so subsede the others. The first of these is compressed and isthiated, but is notable for its wide pools of mottle which we use sometimes for deranging stations. We've transplated club-mosses from Earth's Devonian and a few ice-fires from Perdition. They climb among the rods which we call devil-hair—" he went on for several minutes but the meaning almost entirely escaped Fair. And it seemed as if the question by which he had hoped to break the ice might run away with the entire interview. He introduced another idea.

" 'Can we freely manipulate the physical extensions of Earth?' " The sprite seemed amused. "You refer, so I assume, to the various aspects of space, time, mass, energy, life, thought and recollection."

"Exactly."

The sprite raised its green corn-silk eyebrows. "I might as sensibly ask can you break an egg by stricking it with a club? The response is on a similar level of seriousness."

Fair had expected a certain amount of condescension and impatience, and was not abashed. "How may I learn these techniques?"

"In the usual manner: through diligent study."

"Ah, indeed—but where could I study? Who would teach me?"

The sprite made an easy gesture, and whorls of green smoke trailed from his fingers to spin through the air. "I could arrange the matter, but since I bear you no particular animosity, I'll do nothing of the sort. And now, I must be gone."

"Where do you go?" Fair asked in wonder and longing. "May I go with you?"

The sprite, swirling a drape of bright green dust over its shoulders, shook his head. "You would be less than comfortable."

"Other men have explored the worlds of magic!"

"True: your uncle Gerald McIntyre, for instance."

"My uncle Gerald learned green magic?"

"To the limit of his capabilities. He found no pleasure in his learning. You would do well to profit by his experience and modify your ambitions." The sprite turned and walked away.

Fair watched it depart. The sprite receded in space and dimension, but never reached the wall of Fair's room. At a distance which might have been fifty yards, the sprite glanced back, as if to make sure that Fair was not following, then stepped off at another angle and disappeared.

Fair's first impulse was to take heed and limit his explorations. He was an adept in white magic, and had mastered the black art—occasionally he evoked a demon

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to liven a social gathering which otherwise threatened to become dull—but he had by no means illuminated every mystery of purple magic, which is the realm of Incarnate Symbols.

Howard Fair might have turned away from the green cycle except for three factors.

First was his physical appearance. He stood rather under medium height, with a swarthy face, sparse black hair, a gnarled nose, a small heavy mouth. He felt no great sensitivity about his appearance, but realized that it might be improved. In his mind's eye he pictured the personified ideal of himself: he was taller by six inches, his nose thin and keen, his skin cleared of its muddy undertone. A striking figure, but still recognizable as Howard Fair. He wanted the love of women, but he wanted it without the interposition of his craft. Many times he had brought beautiful girls to his bed, lips wet and eyes shining; but purple magic had seduced them rather than Howard Fair, and he took limited satisfaction in such conquests.

Here was the first factor which drew Howard Fair back to the green lore; the second was his yearning for extended, perhaps eternal, life; the third was simple thirst for knowledge.

The fact of Gerald McIntyre's death, or dissolution, or disappearance—whatever had happened to him—was naturally a matter of concern. If he had won to a goal so precious, why had he died so quickly? Was the "infinite reward" so miraculous, so exquisite, that the mind failed under its possession? (If such were the case, the reward was hardly a reward.)

Fair could not restrain himself, and by degrees returned to a study of green magic. Rather than again invoke the sprite whose air of indulgent contempt he had found exasperating, he decided to seek knowledge by an indirect method, employing the most advanced concepts of technical and cabalistic science.

He obtained a portable television transmitter which he loaded into his panel truck along with a receiver. On a Monday night in early May, he drove to an abandoned graveyard far out in the wooded hills, and there, by the light of a waning moon, he buried the television camera in graveyard clay until only the lense protruded from the soil.

With a sharp alder twig he scratched on the ground a monstrous outline. The television lens served for one eye, a beer bottle pushed neck-first into the soil the other.

During the middle hours, while the moon died behind wisps of pale cloud, he carved a word on the dark forehead; then recited the activating incantation.

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The ground rumbled and moaned, the golem heaved up to blot out the stars.

The glass eyes stared down at Fair, secure in his pentagon.

"Speak!" called out Fair. *"Enteresthes, Akmai Adonai Bidemgir! Elohim, pa rahulli! Enteresthes, HVOI!* Speak!"

"Return me to earth, return my clay to the quiet clay from whence you roused me."

"First you must serve."

The golem stumbled forward to crush Fair, but was halted by the pang of protective magic.

"Serve you I will, if serve you I must."

Fair stepped boldly forth from the pentagon, strung forty yards of green ribbon down the road in the shape of a narrow V. "Go forth into the realm of green magic," he told the monster. "The ribbons reach forty miles, walk to the end, turn about, return, and then fall back, return to the earth from which you rose."

The golem turned, shuffled into the V of green ribbon, shaking off clods of mold, jarring the ground with its ponderous tread.

Fair watched the squat shape dwindle, recede, yet never reach the angle of the magic V. He returned to his panel truck, tuned the television receiver to the golem's eye, and surveyed the fantastic vistas of the green realm.

Two elementals of the green realm met on a spun-silver landscape. They were Jaadian and Misthemar, and they fell to discussing the earthen monster which had stalked forty miles through the region known as Cil; which then, turning in its tracks, had retraced its steps, gradually increasing its pace until at the end it moved in a shambling rush, leaving a trail of clods on the fragile moth-wing mosaics.

"Events, events, events," Misthemar fretted, "they crowd the chute of time till the bounds bulge. Or then again, the course is as lean and spare as a stretched tendon . . . But in regard to this incursion . . ." He paused for a period of reflection, and silver clouds moved over his head and under his feet.

Jaadian remarked, "You are aware that I conversed with Howard Fair; he is so obsessed to escape the squalor of his world that he acts with recklessness."

"The man Gerald McIntyre was his uncle," mused Misthemar. "McIntyre besought, we yielded; as perhaps now we must yield to Howard Fair."

Jaadian uneasily opened his hand, shook off a spray of emerald fire. "Events press, both in and out. I find myself unable to act in this regard."

"I likewise do not care to be the agent of tragedy."

A Meaning came fluttering up from below: "A disturbance

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among the spiral towers! A caterpillar of glass and metal has come clanking; it has thrust electric eyes into the Portinone and broke open the Egg of Innocence. Howard Fair is the fault."

Jaadian and Misthemar consulted each other with wry disinclination. "Very well, both of us will go; such a duty needs two souls in support."

They impinged upon Earth and found Howard Fair in a wall booth at a cocktail bar. He looked up at the two strangers and one of them asked, "May we join you?"

Fair examined the two men. Both wore conservative suits and carried cashmere topcoats over their arms. Fair noticed that the left thumb-nail of each man glistened green.

Fair rose politely to his feet. "Will you sit down?"

The green sprites hung up their overcoats and slid into the booth. Fair looked from one to the other. He addressed Jaadian. "Aren't you he whom I interviewed several weeks ago?"

Jaadian assented. "You have not accepted my advice."

Fair shrugged. "You asked me to remain ignorant, to accept my stupidity and ineptitude."

"And why should you not?" asked Jaadian gently. "You are a primitive in a primitive realm; nevertheless not one man in a thousand can match your achievements."

Fair agreed, smiling faintly. "But knowledge creates a craving for further knowledge. Where is the harm in knowledge?"

Mithemar, the more mercurial of the sprites, spoke angrily. "Where is the harm? Consider your earthen monster! It befouled forty miles of delicacy, the record of ten million years. Consider your caterpillar! It trampled our pillars of carved milk, our dreaming towers, damaged the nerve-skeins which extrude and waft us our Meanings."

"I'm dreadfully sorry," said Fair. "I meant no destruction."

The sprites nodded. "But your apology conveys no guarantee of restraint."

Fair toyed with his glass. A waiter approached the table, addressed the two sprites. "Something for you two gentlemen?"

Jaadian ordered a glass of charged water, as did Misthemar. Fair called for another highball.

"What do you hope to gain from this activity?" inquired Misthemar. "Destructive forays teach you nothing!"

Fair agreed. "I have learned little. But I have seen miraculous sights. I am more than ever anxious to learn."

The green sprites glumly watched the bubbles rising in their glasses. Jaadian at last drew a deep sigh. "Perhaps we can obviate toil on your part and disturbance on ours. Explicitly, what

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gains or advantages do you hope to derive from green magic?"

Fair, smiling, leaned back into the red imitation-leather cushions. "I want many things. Extended life—mobility in time—comprehensive memory—augmented perception, with vision across the whole spectrum. I want physical charm and magnetism, the semblance of youth, muscular endurance . . . Then there are qualities more or less speculative, such as—"

Jaadian interrupted. "These qualities and characteristics we will confer upon you. In return you will undertake never again to disturb the green realm. You will evade centuries of toil; we will be spared the nuisance of your presence, and the inevitable tragedy."

"Tragedy?" inquired Fair in wonder. "Why tragedy?"

Jaadian spoke in a deep reverberating voice. "You are a man of Earth. Your goals are not our goals. Green magic makes you aware of our goals."

Fair thoughtfully sipped his highball. "I can't see that this is a disadvantage. I am willing to submit to the discipline of instruction. Surely a knowledge of green magic will not change me into a different entity?"

"No. And this is the basic tragedy!"

Misthemar spoke in exasperation. "We are forbidden to harm lesser creatures, and so you are fortunate; for to dissolve you into air would end all the annoyance."

Fair laughed. "I apologize again for making such a nuisance of myself. But surely you understand how important this is to me?"

Jaadian asked hopefully, "Then you agree to our offer?"

Fair shook his head. "How could I live, forever young, capable of extended learning, but limited to knowledge which I already see bounds to? I would be bored, restless, miserable."

"That well may be," said Jaadian. "But not so bored, restless and miserable as if you were learned in green magic."

Fair drew himself erect. "I must learn green magic. It is an opportunity which only a person both torpid and stupid could refuse."

Jaadian sighed. "In your place I would make the same response." The sprites rose to their feet. "Come then, we will teach you."

"Don't say we didn't warn you," said Misthemar.

Time passed. Sunset waned and twilight darkened. A man walked up the stairs, entered Howard Fair's apartment. He was tall, unobtrusively muscular. His face was sensitive, keen, humorous; his left thumb-nail glistened green.

Time is a function of vital processes. The people of Earth had perceived the motion of their clocks. On this understanding, two hours

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had elapsed since Howard Fair had followed the green sprites from the bar.

Howard Fair had perceived other criteria. For him the interval had been seven hundred years, during which he had lived in the green realm, learning to the utmost capacity of his brain.

He had occupied two years training his senses to the new conditions. Gradually he learned to walk in the six basic three-dimensional directions, and accustomed himself to the fourth-dimensional short-cuts. By easy stages the blinds over his eyes were removed, so that the dazzling over-human intricacy of the landscape never completely confounded him.

Another year was spent training him to the use of a code-language—an intermediate step between the vocalizations of Earth and the meaning-patterns of the green realm, where a hundred symbol-flakes (each a flitting spot of delicate iridescence) might be displayed in a single swirl of import. During this time Howard Fair's eyes and brain were altered, to allow him the use of the many new colors, without which the meaning-flakes could not be recognized.

These were preliminary steps. For forty years he studied the flakes, of which there were almost a million. Another forty years was given to elementary permutations and shifts, and another forty to parallels, attenuation, diminishments and extensions; and during this time he was introduced to flake patterns, and certain of the more obvious displays.

Now he was able to study without recourse to the code-language, and his progress became more marked. Another twenty years found him able to recognize more complicated Meanings, and he was introduced to a more varied program. He floated over the field of moth-wing mosaics, which still showed the footprints of the golem. He sweated in embarrassment, the extent of his wicked willfulness now clear to him.

So passed the years. Howard Fair learned as much green magic as his brain could encompass.

He explored much of the green realm, finding so much beauty that he feared his brain might burst. He tasted, he heard, he felt, he sensed, and each one of his senses was a hundred times more discriminating than before. Nourishment came in a thousand different forms: from pink eggs which burst into a hot sweet gas, suffusing his entire body; from passing through a rain of stinging metal crystals; from simple contemplation of the proper symbol.

Homesickness for Earth waxed and waned. Sometimes it was insupportable and he was ready to forsake all he had learned and abandon his hopes for the future. At other times the magnificence of

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the green realm permeated him, and the thought of departure seemed like the threat of death itself.

By stages so gradual he never realized them he learned green magic.

But the new faculty gave him no pride: between his crude ineptitudes and the poetic elegance of the sprites remained a tremendous gap—and he felt his innate inferiority much more keenly than he ever had in his old state. Worse, his most earnest efforts failed to improve his technique, and sometimes, observing the singing joy of an improvised manifestation by one of the sprites, and contrasting it to his own labored constructions, he felt futility and shame.

The longer he remained in the green realm, the stronger grew the sense of his own maladroitness, and he began to long for the easy environment of Earth, where each of his acts would not shout aloud of vulgarity and crassness. At times he would watch the sprites (in the gossamer forms natural to them) at play among the pearl-petals, or twining like quick flashes of music through the forest of pink spirals. The contrast between their verve and his brutish fumbling could not be borne and he would turn away. His self-respect dwindled with each passing hour, and instead of pride in his learning, he felt a sullen ache for what he was not and could never become. The first few hundred years he worked with the enthusiasm of ignorance, for the next few he was buoyed by hope. During the last part of his time, only dogged obstinacy kept him plodding through what now he knew for infantile exercises.

In one terrible bitter-sweet spasm, he gave up. He found Jaadian weaving tinkling fragments of various magics into a warp of shining long splines. With grave courtesy, Jaadian gave Fair his attention, and Fair laboriously set forth his meaning.

Jaadian returned a message. "I recognize your discomfort, and extend my sympathy. It is best that you now return to your native home."

He put aside his weaving and conveyed Fair down through the requisite vortices. Along the way they passed Misthemar. No flicker of meaning was expressed or exchanged, but Howard Fair thought to feel a tinge of faintly malicious amusement.

Howard Fair sat in his apartment. His perceptions, augmented and sharpened by his sojourn in the green realm, took note of the surroundings. Only two hours before, by the clocks of Earth, he had found them both restful and stimulating; now they were neither. His books: superstition, spuriousness, earnest nonsense. His private journals and workbooks:

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a pathetic scrawl of infantilisms. Gravity tugged at his feet, held him rigid. The shoddy construction of the house, which heretofore he never had noticed, oppressed him. Everywhere he looked he saw slipshod disorder, primitive filth. The thought of the food he must now eat revolted him.

He went out on his little balcony which overlooked the street. The air was impregnated with organic smells. Across the street he could look into windows where his fellow humans lived in stupid squalor.

Fair smiled sadly. He had tried to prepare himself for these reactions, but now was surprised by their intensity. He returned into his apartment. He must accustom himself to the old environment. And after all there were compensations. The most desirable commodities of the world were now his to enjoy.

Howard Fair plunged into the enjoyment of these pleasures. He forced himself to drink quantities of expensive wines, brandies, liqueurs, even though they offended his palate. Hunger overcame his nausea, he forced himself to the consumption of what he thought of as fried animal tissue, the hypertrophied sexual organs of plants. He experimented with erotic sensations, but found that beautiful women no longer seemed different from the plain ones, and that he could barely steel himself to the untidy contacts. He bought libraries of erudite books, glanced through them with contempt. He tried to amuse himself with his old magics; they seemed ridiculous.

He forced himself to enjoy these pleasures for a month; then he fled the city and established a crystal bubble on a crag in the Andes. To nourish himself, he contrived a thick liquid, which, while by no means as exhilarating as the substances of the green realm, was innocent of organic contamination.

After a certain degree of improvisation and make-shift, he arranged his life to its minimum discomfort. The view was one of austere grandeur; not even the condors came to disturb him. He sat back to ponder the chain of events which had started with his discovery of Gerald McIntyre's workbook. He frowned. Gerald McIntyre? He jumped to his feet, looked far off over the crags.

He found Gerald McIntyre at a wayside service station in the heart of the South Dakota prairie. McIntyre was sitting in an old wooden chair, tilted back against the peeling yellow paint of the service station, a straw hat shading his eyes from the sun.

He was a magnetically handsome man, blond of hair, brown of skin, with blue eyes whose gaze stung like the touch of icicle. His

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left thumb-nail glistened green.

Fair greeted him casually; the two men surveyed each other with wry curiosity.

"I see you have adapted yourself," said Howard Fair.

McIntyre shrugged. "As well as possible. I try to maintain a balance between solitude and the pressure of humanity." He looked into the bright blue sky where crows flapped and called. "For many years I lived in isolation. I began to detest the sound of my own breathing."

Along the highway came a glittering automobile, rococo as a hybrid goldfish. With the perceptions now available to them, Fair and McIntyre could see the driver to be red-faced and truculent, his companion a peevish woman in expensive clothes.

"There are other advantages to residence here," said McIntyre. "For instance, I am able to enrich the lives of passers-by with trifles of novel adventure." He made a small gesture; two dozen crows swooped down and flew beside the automobile. They settled on the fenders, strutted back and forth along the hood, fouled the windshield.

The automobile squealed to a halt, the driver jumped out, put the birds to flight. He threw an ineffectual rock, waved his arms in outrage, returned to his car, proceeded.

"A paltry affair," said McIntyre with a sigh. "The truth of the matter is that I am bored." He pursed his mouth and blew forth three bright puffs of smoke: first red, then yellow, then blazing blue. "I have arrived at the estate of foolishness, as you can see."

Fair surveyed his great-uncle with a trace of uneasiness. McIntyre laughed. "No more pranks. I predict, however, that you will presently share my malaise."

"I share it already," said Fair. "Sometimes I wish I could abandon all my magic and return to my former innocence."

"I have toyed with the idea," McIntyre replied thoughtfully. "In fact I have made all the necessary arrangements. It is really a simple matter." He led Fair to a small room behind the station. Although the door was open, the interior showed a thick darkness.

McIntyre, standing well back, surveyed the darkness with a quizzical curl to his lip. "You need only enter. All your magic, all your recollections of the green realm will depart. You will be no wiser than the next man you meet. And with your knowledge will go your boredom, your melancholy, your dissatisfaction."

Fair contemplated the dark doorway. A single step would resolve his discomfort.

He glanced at McIntyre; the two surveyed each other with sardonic amusement. They returned to the front of the building.

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"Sometimes I stand by the door and look into the darkness," said McIntyre. "Then I am reminded how dearly I cherish my boredom, and what a precious commodity is so much misery."

Fair made himself ready for departure. "I thank you for this new wisdom, which a hundred more years in the green realm would not have taught me. And now—for a time, at least—I go back to my crag in the Andes."

McIntyre tilted his chair against the wall of the service station. "And I—for a time, at least—will wait for the next passer-by."

"Goodby then, Uncle Gerald."

"Goodby, Howard."

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Luminous Dr. Asimov here continues his discussions of light, the quantum theory, and relativity. He insists that the title of this article was stolen from him by Rudyard Kipling some decades ago.

THE LIGHT THAT FAILED!

by Isaac Asimov

LATE LAST SUMMER, A FETCHING YOUNG LADY FROM *Newsweek* asked permission to interview me; permission which I granted at once, you may be sure. It seems that *Newsweek* was planning to do a special issue on the Space Age, and it was this young lady's job to gather some comments on the matter by various science fiction personalities.

I discoursed learnedly on science fiction to her, filling ninety unforgiving minutes, before I ungripped her with my glittering eye.

Eventually, the special issue appeared, dated October 8, 1962, and there, on page 104, was three-quarters of a page devoted to science fiction (and not bad commentary either; no complaints on that score). Within that section, every bit of my long-winded brilliance was discarded with the exception of one remark which read as follows:

"But sci-fi is 'a topical fairy tale where all scientists' experiments succeed,' comments Isaac Asimov . . ."*

Ever since then, this quotation has bothered me. Oh, I said it; I wasn't misquoted. It's just that I seem to have implied that what scientists want are experiments that succeed, and that is not necessarily true.

Under the proper circumstances, a failure, if unexpected and significant, can do more for the development of science than a hundred routine successes. In fact, the most dramatic single experiment in the last three and a half centuries was an outright failure of so thunderous a nature as to win its perpetrator a Nobel Prize. What a happy fairy tale for scientists it would be if all experiments failed like that!

This fits in, fortunately, with the fact that two months ago, I dis-

*My natural modesty forbids my quoting the rest of the passage, but you can look it up for yourself if you like. Please do.

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cussed the ether (THE RIGID VACUUM, April, 1963) and ended at a point where it seemed enthroned immovably in the very fabric of physics. I warned you then that at the very peak of its power and prosperity, the ether was to be dashed from its throne and destroyed.

The man who brought about that destruction was an American physicist named Albert Abraham Michelson. What started him on the track was a peculiar scientific monomania; Michelson got his kicks out of measuring the velocity of light. Such a measurement was his first scientific achievement, and his last, and just about everything he did in science in between grew out of his perpetual efforts to improve his measurements.

And if you think I'm going to go one step farther without retreating three centuries to discuss the history of the measurement of the velocity of light, you little know me.

Throughout ancient and medieval times the velocity of light was assumed (by those who thought about the matter at all) to be infinite. The Italian scientist, Galileo, was the first to question this. About 1630, he proposed a method for measuring the velocity of light.

Two people, he suggested, were to stand on hilltops a mile apart, both carrying shielded lanterns. One was to uncover his lantern. The other upon seeing the light was at once to uncover his own lantern. If the first man measured the time that elapsed between his own uncovering and the sight of the spark of light from the other hill, he would know how long it took light to cover the round distance. Galileo had actually tried the experiment, he said, but had achieved no reasonable results.

It is not hard to see why he had failed, in the light of later knowledge. Light travels so quickly that the time lapse between emission and return was far too short for Galileo to measure with any instrument that then existed. There would be a small time lapse to be sure, but that represented time it took for the assistant to think, "Hey, there's the old man's light" and get his own light uncovered.

All that Galileo could possibly have shown by his experiment, which was correct in principle, was that if the velocity of light was not infinite, then, it was at least very, very fast by ordinary standards. Still, it was useful to show even this much.

The next step was taken nearly half a century later. In 1676, a Danish astronomer, Olaus Roemer, was working at the Paris Observatory, observing Jupiter's satellites. Their times of revolution had been carefully measured so it seemed possible to predict the exact moments at

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which each would pass into eclipse behind Jupiter, and this, too, had been done.

To Roemer's surprise, however, the moons were being eclipsed at the wrong times. At those times of the year when the Earth was approaching Jupiter, the eclipses came more and more ahead of schedule, while when Earth was receding from Jupiter, they fell progressively further behind schedule.

Roemer reasoned that he did not see an eclipse when it took place, but only when the cut-off end of the light beam reached him. The eclipse itself took place at the scheduled moment but when the Earth was closer than average to Jupiter, he *saw* the eclipse sooner than if the Earth were farther than average from Jupiter. Earth was at a minimum distance from Jupiter when both planets were in a line on the same side of the Sun, and it was at a maximum distance when both planets were in a line on opposite sides of the Sun. The difference between those distances was exactly the diameter of the Earth's orbit.

The difference in time between the earliest eclipse of the satellites and the latest eclipse must therefore represent the time it took light to travel the diameter of Earth's orbit. Roemer measured this time as 22 minutes and, accepting the best figure then available for the diameter of the Earth's orbit, calculated that light travelled at a velocity of 138,000 miles per second. This is only three-quarters of what is now accepted as the correct value* but it hit the correct order of magnitude and for a first attempt that was magnificent.

Roemer announced his results and it made a small splash but aroused as much opposition as approval and the matter was forgotten for another half-century.

In the 1720's, the English astronomer, James Bradley, was hot on the trail of the parallax of the stars. This had become a prime astronomical problem after Copernicus had first introduced the heliocentric theory of the Solar system. If the Earth really moved about the Sun, said the anti-Copernicans, then the nearby stars should seem to shift position ("parallactic displacement") when compared with the more distant stars. Since no such shift was observed, Copernicus must be wrong.

"Ah," said the Copernicans in rebuttal, "but even the nearest stars are so distant that the parallactic displacement is too small to measure."

The actual maximum difference of eclipse times, by later measurements, turned out to be 16 minutes 36 seconds. The diameter of the earth's orbit is about 185,500,000 miles, and I leave it to you, oh Gentle Reader, to calculate a good approximation of the correct velocity of light.

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Yet even after astronomers had all adopted the heliocentric theory, there was still discomfort over the question of the stellar parallax. This business of "too small to measure" seemed very much like an evasion. Observation should be refined to the point where the shift *could* be measured. That would accomplish two things. It would show how far the nearest stars were and it would be the final proof that the Earth was moving round the Sun.

Bradley's close observations did, indeed, demonstrate that the stars showed a tiny displacement through the year. However, this displacement was not of the right sort to be explained by the Earth's motion. Something else had to be responsible and it was not until 1728 that a suitable explanation occurred to Bradley.

Suppose we consider the starlight bombarding the earth to be like rain drops falling in a dead calm. If a man were standing motionless in such a rainstorm, he would have to hold an umbrella vertically overhead to ward off the vertically-dropping rain. If he were to walk, however, he would be walking into the rain and he would have to angle the umbrella forward, or some drops that would just miss the umbrella would nevertheless hit him. The faster he walks, the greater the angle at which he would have to tilt his umbrella.

In the same way, to observe light from a moving earth, the telescope has to be angled very slightly. As the earth changes the direction of its motion in its course about the sun, the slight angle of the telescope must be changed constantly and the star seems to mark out a tiny ellipse against the sky (with reference to the Sun). Bradley had discovered what is called the "aberration of light."

This was not parallactic displacement and it did not help determine the distance of any stars (that had to wait still another century). Just the same it did prove the earth was moving, for if the earth were motionless, the telescope would not have to be tilted at all, and the star would not seem to move.

It gave additional information, too. The amount of the aberration of light depended on two factors; the velocity of light and the velocity of the earth's motion in its orbit. The latter was known (about 18½ miles per second); therefore the former could be calculated. Bradley's estimate was that light had a velocity of about 188,500 miles per second. This was only 1.2% above the true value.

Two independent astronomical methods had yielded figures for the velocity of light and improved observations showed the two methods yielded roughly the same answer. Was there no way, however, in which

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the velocity could be measured on Earth, under conditions controlled by the experimenter?

The answer was yes, but the world had to wait a century and a quarter after Bradley's discovery before a method was found. The discoverer was a French physicist, Armand Hippolyte Louis Fizeau, who returned to Galileo's method but eliminated the personal element. Instead of having an assistant return a second beam of light, he had a mirror reflect the first one.

In 1849, Fizeau set up a rapidly turning toothed disk on one hill-top and a mirror on another, five miles away. Light passed through one gap between the teeth of the turning disk to the mirror and was reflected. If the disk turned at the proper speed, the reflected light returned just as the next gap moved into line.

From the velocity at which the wheel had to be turned in order for the returning light to be seen, it was possible to calculate the time it took light to cover the ten-mile round distance. The value so determined was not as good as those the best astronomic measurements had provided; it was 5% off, but it was excellent for a first laboratory attempt.

In 1850, Fizeau's assistant, Jean Bernard Leon Foucault, improved the method by using two mirrors, one of which revolved rapidly. The revolving mirror reflected the light at an angle and from that angle, the velocity of light could be calculated. By 1862, he had obtained values within a percent or so of the true one.

Foucault went further. He measured the velocity of light through water and other transparent media. (You could do this with laboratory methods but not with astronomical methods.) He discovered in this way that light moved more slowly in water than in air.

This was important. If the particle theory of light were true, light should move more rapidly in water than in air; if the wave theory of light were true, light should move more slowly in water than in air. By the mid-19th century, to be sure, most physicists had accepted the wave theory. Nevertheless, Foucault's experiment was widely interpreted as having placed the final nail in the coffin of the particle theory.*

And now we come to Michelson. Michelson had been born in 1852 in a section of Poland that at that time was under German rule and he was

*I discussed the nature of light in THE RIGID VACUUM and it is only with difficulty that I refrain from repeating everything I said there. However, I tell myself firmly that the Gentle Reader has read the article and remembers every word as though it were inscribed on his cerebrum in letters of fire. —Or he can go back and check the article in the appropriate issue, for surely he hoards all back numbers of this worthy periodical.

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brought to the United States two years later. His family did not follow the usual pattern of settling in one of the large east coast cities. Instead, the Michelsons made their way out to the far West, a region which the forty-niners had just ripped wide open.

The Michelson family did well there (as merchants, not as gold-miners) and young Albert applied for entrance into Annapolis in 1869. He passed the necessary tests but the son of a war-veteran (Civil War, of course) took precedence. It took the personal intervention of President Grant (with an assist from the Nevada congressman who pointed out the political usefulness of such a gesture to the family of a prominent Jewish merchant of the new west) to get Albert in.

He graduated in 1873 and served as a science instructor at the Academy during the latter part of that decade. In 1878, the velocity-of-light bug bit him and he never recovered. Using Foucault's method but adding some ingenious improvements, he made his first report on the velocity, which he announced as 186,508 miles per second. He was 230 miles per second too high, but his result was only ⅛ of 1 percent off.

In 1882, he tried again, after some years spent in studying optics in Germany and France. This time he came out with a figure of 186,320 miles per second, which was less than 50 miles per second high, or only 1/30 of 1 percent off.

Meanwhile, though, it had occurred to Michelson that speeding light could be made to reveal some fundamental secrets of the universe.

One of the big things in the 1880's was the "luminiferous ether" (see THE RIGID VACUUM). The ether was considered to be motionless, at "absolute rest," and if light were ether-waves then its velocity, if measured carefully enough under appropriate conditions, could give the value of the absolute velocity of the earth; not just the earth's velocity with respect to the Sun but with respect to the very fabric of the universe. Such a value would be of the utmost importance to the philosophy of science since without it one could not be sure of the validity of all the laws of mechanics that had been worked out since the time of Galileo.

Let me explain how this works. Suppose an airplane were moving at 150 miles an hour and encountered winds of 145 miles an hour. If it were travelling with the wind, the plane would seem to move at 295 miles an hour (as viewed from the ground). If it travelled against the wind, it would travel only 5 miles an hour with respect to the ground. If the velocity of the plane on a windless day were known, then from the difference in velocity produced by the wind in either direction, the wind's own velocity could be calculated.

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Now suppose the earth were moving through the stationary ether. From a mechanical standpoint, this would be equivalent to the Earth standing still while the ether moved past it. Let's take the latter view for an "ether wind" is easy to visualize.

Light, consisting (as was thought) of ether waves, would move—relative to the Earth—with the ether, moving faster than average in the direction of the ether wind, more slowly than average against that direction, and at intermediate velocities in intermediate directions.

Clearly, the velocity of the either wind could not be very great. If it were blowing at a considerable fraction of the velocity of light then all sorts of strange phenomena would be observable. For instance, light would radiate outward in an ellipse instead of in a circle. The fact that no such phenomena were ever observed, meant that the effects must be very small and that earth's absolute velocity could only be a small fraction of the velocity of light.

Michelson turned his attention toward the possibility of measuring that small fraction.

In 1881, Michelson had constructed an "interferometer," a device which was designed to split a light-beam in two, send the parts along different paths at right angles to each other, then bring them back together again.

The two rays of light were made to travel exactly the same distance in the process of going and returning and, therefore, presumably spent the same time at their travels. On returning to their starting point they would merge into one beam again, just as though they had never separated. The merged beams would then display no properties that the original beam had not had.

If, on the other hand, the two light rays had been on their travels for different times, the wave-forms of the two rays of light would no longer match; upon merging they would find themselves out of step. There would be places where the waves of one light ray would be moving up while the waves of the other would be moving down. There would then be mutual cancellation ("interference") and darkness could be produced. The areas of darkness would recur periodically and take the form of a kind of zebra stripe arrangement ("interference fringes").

The idea was to adjust the instrument so that, as far as was humanly possible, the two light rays would be made to travel just the same distance. If the velocity of light were constant, the two rays would spend the same time at their travels, would match on merging, and no interference fringes would appear.

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However, this did not allow for the ether-wind, the existence of which was then assumed. If one of the light rays went with the wind, it would return against the wind. The other light ray, sent out at right angles, would then go cross-wind and return cross-wind. It can be shown that, in this case, the time taken by the one ray of light to travel with the wind, then return back against it, is slightly longer than the time taken by the other ray of light to travel cross-wind both ways.

The stronger the ether-wind, the greater the discrepancy in time; and the greater the discrepancy in time, the wider the interference fringes. By observing the interference fringes, then, Michelson would be able to measure the velocity of the ether-wind, and that would give the Earth's absolute motion.

Michelson tried the experiment first in Germany, anchoring his interferometer to rock, and driving himself mad trying to eliminate the vibrations set up by city traffic. When he finally sent his split-beam of light on their separate paths, he found they brought back no information. The light had failed, and failed miserably. It brought back nothing; no interference fringes at all.

Something had gone wrong, but Michelson did not know what. He let the matter go for a few years.

He returned to the United States, resigned from the Navy, joined the faculty of a new school called "Case School of Applied Science" in Cleveland and there met a chemist named Edward Williams Morley. Morley's ambition had been to be a minister and he took his chemist's job only on condition that he could preach in the school's chapel. His own piece of scientific monomania lay in comparing the atomic weights of oxygen and hydrogen.

Michelson and Morley discussed the interferometer experiment and finally, in 1886, joined forces in order to try again under conditions of the most heroic precautions. They dug down to bedrock to anchor the equipment to the solid planet itself. They built a brick base on which they placed a cement top with a doughnut shaped depression. They placed mercury in the depression and let a wooden float rest upon the mercury. On the wood was a stone base in which the parts of the interferometer were firmly fixed. All was so well-balanced that the lightest touch would make the interferometer revolve steadily on its mercury support.

Now they were ready for what was to come to be known as the "Michelson-Morley experiment." Once again a ray of light was split and sent out on its errand; and once again the light failed and brought back

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nothing. The only interference fringes that were to be seen were tiny ones that clearly represented unavoidable imperfections of the instrument.

Of course, it might be that the rays of light weren't heading exactly upwind and downwind, but in such directions that the ether wind had no effect. However, the instrument could be rotated. Michelson and Morley took measurements at all angles and surely the ether-wind had to be blowing in one of those directions. They did even better than that. They kept taking measurements all year while the Earth itself changed direction of motion constantly as it moved in its orbit about the Sun.

They made thousands of observations and by July, 1887, they were ready to report. The results were negative. They had tried to measure Earth's absolute velocity and they had failed and that was that.

There had to be an explanation of this failure and no less than five of them can be considered for a moment. I'll list them.

1) The experiment can be dismissed. Perhaps something was wrong in the equipment or the procedure or the reasoning behind it. Men such as the English scientists; Lord Kelvin and Oliver Lodge, took that point of view. However, this point of view is not tenable. Since 1887, numerous physicists have repeated the Michelson-Morley experiment with greater and greater precision. In 1960, masers (atomic clocks) were used for the purpose and an accuracy of one part in a trillion was achieved. But always, down to and including the 1960 experiments, the Michelson-Morley failure was repeated. There were no interference fringes. The light rays took precisely the same time to travel in any direction, regardless of the ether-wind.

2) Well, then, the experiment is valid and shows there is no ether wind, for any one of four different reasons:

a) The Earth is not moving; it is the motionless center of the Universe. This would involve so many other paradoxes and would fly in the face of so much astronomical and physical knowledge gained since the time of Copernicus that no scientist seriously advanced this for a moment. However, a friend of mine has pointed out that the only way of disproving this suggestion beyond a doubt was to run the Michelson-Morley experiment elsewhere than on the Earth. Perhaps when we reach the Moon, we ought to make it one of the early orders of business to repeat the Michelson-Morley experiment there. If it proves negative (and I'm sure it will!) we can certainly conclude that the Earth and the Moon can't both simultaneously be motionless. That one or the other is motionless is, at least, conceivable; that both are, is not.

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b) The Earth does move, but in doing so it drags the neighboring ether with it, so that it seems motionless compared with the ether that is right at the surface of the Earth. For that reason, no interference fringes are produced. The English physicist, George Gabriel Stokes, suggested this. Unfortunately, this implies that there is friction between the Earth and the ether and this would raise the serious question as to why the motion of heavenly bodies wasn't continually being slowed by their passage through the ether. It was as hard to believe in the "ether-drag" as in the motionless Earth, and Stokes' notion died a quick death.

Two suggestions survived, however:

c) The Irish physicist, George Francis Fitzgerald, suggested that all objects (and therefore all measuring instruments) grew shorter in the direction of motion, according to a formula which was easily derived. (This is the "Fitzgerald contraction.") The Fitzgerald contraction introduced a factor that just neutralized the difference in time spent by the two light-rays on their travel and therefore accounted for the absence of interference fringes. And yet the Fitzgerald contraction had the appearance of a "gimmick factor." It worked, yes, but why should the contraction exist at all?

d) The Austrian physicist, Ernst Mach, went to the heart of the matter. He said there was no ether-wind because there was no ether. What could be simpler?

This was not a strange thing for Mach to have said. He was a rebel who insisted that only observable phenomena were rightly a matter for scientific inquiry, and that scientists should not set up models that were not themselves directly observable, and then believe in their actual existence. Mach even refused to accept atoms as anything more than a convenient fiction. Naturally, it was to be expected that he would be ready to scrap the ether the first chance he got.

How tempting that must have been? The ether was such a ridiculous and self-contradictory substance (see THE RIGID VACUUM) that some of the greatest 19th-century theoretical physicists had worn themselves out trying to explain it. Why not throw it away, as Mach had irascibly suggested?

The trouble was—how would one then account for the fact that light could cross a vacuum? Everyone admitted that light consisted of waves, and the waves had to be waves of SOMETHING. If the ether existed, light consisted of waves of ether. If the ether did not exist, then light consisted of waves of WHAT?

Physics was hovering between the frying-pan of ether and the fire

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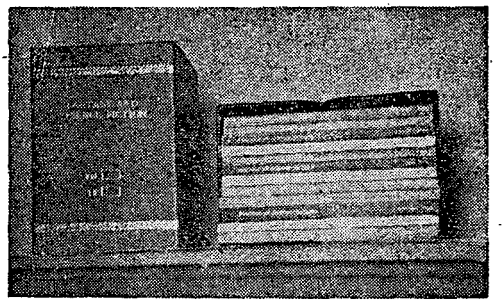
of complete chaos, and heaven only knows what would have happened if two German scientists, Max Karl Ernst Ludwig Planck in 1900, and Albert Einstein in 1905, had not come along to save the situation.

Save it, however, they did. The work of Planck and Einstein proved that the ether was not needed for light to travel through a vacuum. When this was done, the ether was no longer useful and it was dropped with a glad cry. The ether has never been required since. It does not exist now; in fact, it never existed. (Einstein's work also placed the Fitzgerald Contraction in the proper perspective.)

As a result the Michelson-Morley light-that-failed was recognized as the most tremendously successful failure in the history of science, for it completely altered the physicists' view of the universe. In 1907, Michelson received the Nobel Prize in Physics, the first American to win one of the science prizes.

That covers everything, I think, except for one little detail. What, exactly, was it that Planck and Einstein did to save the situation?

Ah, but that is for another article at another time. Do you think I'm going to write myself out of a job by telling you everything at once?



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Since lilacs last in his dooryard bloomed Vance Aandahl has married Feghoot-contributor Lenore Sellers and started work on another novel, meanwhile continuing his studies at the University of Colorado. We felicitate the gifted and popular Mr. A. on all three counts, confident (or at least hopeful) that none of them will prevent his continuing to write the sparkling and polychromatic stories of which we have been privileged to buy a quantity. Evidence that our faith doth not bootless stand you see before you in a story which will probably (as was said of Voltaire) make you laugh—and wince—at the same time. The werewolf is a staple of European folk-lore, the Brazilians of the middle Amazon speak of wereporpoises, and the Malays of the weretiger. Neither wolf, porpoise, nor tiger play any part at all in the groves of the American acadame; but the martini? *Oh my friends and ah my foes, the martini! and its unhoney'd wine. Have you ever, have you never, wondered at the conduct and behavior of some previously solid faculty member? Perhaps he had just encountered*

THE WEREMARTINI

by Vance Aandahl

I FIRST SAW HER SITTING IN THE third row of my Milton class. She was looking through a fine arts text, completely oblivious to my lecture, the students around her, or even her presence in the class. She was an aristocrat—a long-legged, lean-hipped creature from the east coast; she had been wearing a swim-suit in Fort Lauderdale for at least one-third of her life—of that I was sure. Her hair was the color of sunburn, with just a streak of Nordic blonde rising up from one temple. Her eyes were Carib blue, and her nose was straight. But her lips—her lips were the lips of a Cleopatra, full and pouted and ripe with unslaked passion . . .

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"Tillyard," I continued, "has called 'Apology for Smectymnuus' the first substantial indication of Milton's *personal* involvement in the struggle. His reply to Hall's charges was written in a white heat of sardonic passion—he turns the accusations upon the accuser with little regard for reason—he snorts down his enemy . . ."

She tilted her head and regarded me momentarily with her clear blue eyes. I saw the light upon her throat, burnished like copper and warm with life . . .

"For example, Milton was charged with spending his afternoons in the London bordelloes." I laughed a little, picturing the great poet sneaking down a cobblestone street. "But Milton sees Hall's own guilt in the charge itself: 'The confuter knows that these things are the furniture of playhouses and bordelloes, therefore, by the same reason, the confuter himself has been traced in those places.' "

She had closed her book and now was inspecting the fingers of one hand. They were thin fingers and brown, with the finest delicacy and grace. Her arms were sunned and covered with a golden down; they played lightly in the mote that fell through the windows across her desk. She pouted her mouth, flicked a spot of dust from one fingernail, and looked up at me. Our eyes met and held contact while I spoke. After a minute she smiled, almost as though with contempt, and turned her head to gaze through the windows. I continued to watch her, running an imaginary finger down the nape of her profiled neck, until the bell rang.

That evening, ensconced in the security of my apartment, I took stock of myself. I was a sober man, content with the excitement of the past, not desiring more of life than what I had. This is not to say that I was a dried-up pedant, for like any man I had my foibles and eccentricities, my secret pleasures and my moments of gay abandon. Unfortunately, such moments were not of the sort that one shares. As Freud might say, I had been arrested in a stage of polymorphous sexuality. My ecstasies were the wind on my face and the sound of dried leaves beneath my feet. I could spend hours fondling a soft object, holding it to my cheek or listening to my breath against it. The sun on my back was like a lover to me.

But these things were only the onset of my ecstasy—the foreplay of my pleasure. For I was something strange indeed in those days. One may speak of me as having been a weremartini.

I looked once more at the grade book. Her name was Sharon Lewis. It should have been Una or Beatricia. She was the archetype of all women and all beauty. I had always loved myself and nothing

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else, but now she had come into the world and I was forced to love her alone. I traced my finger through the air, touching an imaginary neck. I let my finger come to rest six inches above the desk at which I sat, a place I now mused upon as her perfect collarbone. I leaned back in the chair and closed my eyes in order to better remember hers. They *were* the color of the Caribbean, and they rolled with deep waves of mystery . . .

I knew then that the ecstasy was coming. I had wanted to spend the evening grading a set of compositions, but such a matter had to wait. The spring wind was panting at the windows and the sweet poisons of dusk had crept into the apartment . . . I touched my shoulders with the fingers of both hands, and a tremor of excitement moved through my body . . . I sighed, and my sigh was the dancing music of an Aeolian harp . . . I breathed, and my breathing was the pulse of the universe . . .

Colors flashed back and forth through my brain like fireflies in an aspen grove . . . seven sounds met and parted and met again in a paradox of dissonant harmony . . . I was floating down a stream of sound, of sonorous tones and deep rhythms, rolling through a country of color beneath a sky of taste . . . and then I saw the distant ocean like a white froth on the horizon, and then I was there . . .

I had lost the vision of ecstasy and become ecstasy itself: in short, I had transformed. I was a martini, resting at a slight tilt on the leather seat of the chair, gazing out at the world in perfect rapture. I blinked my olive eye and jiggled my gin. Then I rested, savoring the warm afterglow of the change. It had always been this way—at first the ecstasy and then the quiet rest, the drowsiness, the sleep that is neither sleep nor something else, the loss of all sensation . . .

When I awoke, I was curled up in the chair, with my arms and legs hanging at four awkward angles. I got up, stretched the cramps out of my limbs, and went into the kitchen. It was already seven-thirty. I ate a hasty breakfast of half-cooked egg and orange juice, put on a clean shirt and a new tie, and shuffled off to the University.

After mumbling disinterestedly through a lecture directed at the handful of students that had come to my eight o'clock composition class, I retired to my office. Dr. Norlin, who shared the office, set up a chessboard and began our daily game with pawn to king four. He was a Negro, with deep lines of sorrow written in his forehead and cheeks. He smiled sadly, touched one finger to the side of his nose, and said, "You look tired, John."

"I spent the evening grading

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themes," I answered, grinning cynically. He laughed gently, looked down at the chess board, and pursed his lips.

"Sicilian?"

"Yes."

"It loses."

I laughed, partly because I was feeling very nervous and partly because I knew that he would beat me. He *always* beat me. He was Phi Beta Kappa, Rhodes, and Congressional Medal of Honor in the war, and he always beat me at chess. I cannot say that my envy of Dr. Norlin was of a nasty and unfriendly sort, but nonetheless it made me very upset at times, perhaps because he was a Negro, perhaps because he was indeed a humble man. Or perhaps I envied him his energy. He was a dynamo. He did everything, and did it well.

I was a pawn down when it happened. At nine-thirty a rap sounded on the door, which then opened before either of us could rise from our chairs. She was wearing a white shirtdress whose open neck revealed a brown V of suntan. She smiled gently at the edge of my desk and closed the door behind her.

"Hello, Sharon," I stammered. "May I help you?"

"I was wondering whether you could explain something to me, Mr. Ward. About Milton."

"Well, my office hours are one to two this afternoon."

"Oh! I'm sorry. But I have a class at one."

"Why don't I give you an appointment for nine tomorrow?"

"Well . . . okay."

I opened my data book and jotted down the appointment. My hand was white; it trembled.

"Thank you, Mr. Ward. I'll come in tomorrow." She smiled with her eyes and lips, and I was lost in the mystery of deep ocean waves . . .

"Your move, John," said Mr. Norlin, after she had left. I shook my head and turned to the game. By nine-forty I had resigned.

In the passage of a month, my passion increased and became feverish. My dreams were only of her, and so too my reveries. In a few weeks the semester would end and she would be gone—I knew not whether to weep or rejoice. Every night I left the apartment and walked across the campus to the sorority house where she lived, tormenting myself like an acned youngster suffering his first love. Sometimes I would linger there for half the night, gazing up at the lighted windows and picturing her behind each of them, like a devil of many forms, forever undressing, and dressing herself. In my mind, she danced for me, undulating through a cloud of thick perfumes . . . her body coiled like a bronze snake in Eden, wrapping itself around my soul and

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crushing it . . . within the links of my desire, I was a prisoner . . .

During this time, I never transformed, never wanted to. I had found a new goal and could not be satisfied with less. I knew that I had to wed her. But to her I was nothing more than a pedagogic nuisance—a grievance which must be suffered. In her eyes, I could see visions of a summer in Fort Lauderdale, and it drove me mad with anger.

"Carl," I said, turning to Dr. Norlin one day in my office. "I don't know how to say this, but I must. I've fallen in love with a student."

He looked up, only slightly astonished.

"And she . . . she'd laugh in my face if I told her. What can I do?"

He laughed. The silly bastard laughed. It was then that I began to hate him.

"John," he said, "you've been working too hard, that's all. Summer vacation will cure everything."

I got up and walked out of the room. He had *laughed* at me. I felt my face burning with shame. Muttering to myself, I walked back to the security of my apartment and crawled into bed. But then, after half an hour of sulking, the answer came to me. It was simple. It was beautiful.

At seven that evening I lifted the phone and dialed her number. I was no longer afraid, no longer apprehensive. I leaned back in a chair and waited for her voice, happy now and ready to execute my plan.

"Hello."

"Hello, Sharon. This is Mr. Ward."

"Oh! Hello, Mr. Ward."

"I phoned you to ask a favor. Will you be busy during the next hour or so?"

"Well, no . . . but . . ."

"I caught a cold this morning, which is why I wasn't in class this afternoon, and the way I feel now I think I'll be sick for another week at least . . ."

"Oh, I'm sorry, Mr. Ward . . ."

"You've been doing very well in class, Sharon, and I thought that perhaps you wouldn't mind leading the discussion this Friday. I've already checked, and I can't get one of the other professors to substitute for me until next Monday. Do you suppose you could take over for a day?"

"Well . . . thank you, Mr. Ward, I wouldn't mind at all, but . . ."

"The only problem is this: I've got some mimeographed sheets I want distributed Friday, and I was wondering if you could stop by my apartment tonight and get them."

"Oh, I see. Well, yes, certainly . . . I can do that. Is it okay if I come over now?"

"Yes. The address is 2401 High. Just two blocks up from the theater."

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"Okay. I'll be right up. It'll be real easy 'cause I've got a car . . ."

"Very good. I'll see you in a few minutes, Sharon."

"Okay."

"Goodbye."

"Bye."

I hung up the phone and laughed. At first I laughed gently, with a quiet glee, but then my head began to bounce and my eyes to water, and I roared with mirth . . . it was so easy, so obvious . . . why hadn't I thought of it before? . . . it didn't matter now, none of my torment did . . . I continued to laugh for at least a minute . . .

Then I arose and dressed myself in a bathrobe and slippers, wrapping a scarf around my neck and placing a half-glass of orange juice on the living room table. I had scarcely settled down when the doorbell rang. Arising and walking to the door, I assumed an attitude of sickliness.

"Hello, Sharon."

"Hi, Mr. Ward." She was wearing the white shirtdress—a symbol of the purity and virgin innocence she was soon to offer me, and her eyes sparkled deep dark blue as she stepped into the apartment.

"Just a minute—I'll go get the papers. Make yourself at home." I walked into my bedroom, half closing the door behind me so that she could not see me. Then I sat down in the leather-bound chair at my desk and clasped my hands together in ecstasy . . . the wind was blowing and I could envision her riding above the treetops on the triumph car of Beatricia . . . I touched my cheeks and sighed, letting the pulsing current of sound wash through my veins and set my brain buzzing with madness . . . the ecstasy was coming now, like starry fire in the night sky . . . it burnt through my body and tossed me into the river of sound that flows through a country of color beneath a sky of taste . . . I swept through a thousand eddies of harmony into the great ocean of mist . . . all around me swam a myriad of deep-sea creatures, darkly-hued as ancient emerald and frilled with a thousand electric-blue tendrils . . . they touched me with their pseudopods and tentacles, gazing into my soul with great golden eyes, and then carried me down to the floor of the ocean, where the music was deep and primal . . . they placed me in the gaping mouth of an irridescent oyster . . . it closed about me and I shrieked with ecstasy . . .

And then I sat waiting, watching the door with my single olive eye. In a minute I heard her voice from the living room: "Mr. Ward! Are you all right?" I waited. I could hear her pacing across the rug. Then the door opened and she peeked in: "Where are you? Are you . . ." Then she knew that I wasn't in the room. She lifted

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one hand to her mouth and looked back over her shoulder. Then she tiptoed in, her eyes wide with fear.

"Where could he have gone?" She looked in the closet, which was, of course, empty. Then she saw me, waiting for her on the chair. "A martini?" She picked me up and looked at me for a moment. Then she set me down, being very careful to place me exactly where I had been, and went to the windows. They were, of course, locked from the inside. She sat down on the bed and rubbed her brow with one hand.

Then she looked at me again. Arising and returning to the chair, she lifted me once more, as though fascinated by the clear sparkle of my liquid innards. I rolled my olive eye and gazed at her. With a sudden movement she lifted me to her lips and drank me . . .

Once again I shrieked with ecstasy, spilling into her with a dazzling explosion, waiting for one moment before the charmed magic casements of the world that was her body, then leaping into her tissues, into her blood, into her very soul . . . I felt her body writhing with mad passion as I conquered it, flooding into its remotest parts, suffusing my liquid potions throughout its cells . . . and then I entered her brain and we become one—perfect One that knows all and is content to know nothing . . . she was I and I was she and we were One, One, One . . .

We awoke from our ecstasy and touched our body. It was Sharon's body and it was John Ward's mind that touched it. Our curiosity reveled upon the soft curve and down of our arms. We went to the kitchen and gazed at our Carib blue eyes in the mirror. We were indeed beautiful . . .

Then we knew what we had to do—one thing remained. We went to the phone and dialed a number. We smiled and caressed our body as the distant ring of the phone buzzed in our ear.

"Hello?"

"Hello, Dr. Norlin?"

"Yes, this is he."

"Dr. Norlin, this is Sharon Lewis. I don't know whether you know me, but I've got to see you. I've got to see you tonight. It's about . . . it's about Mr. Ward."

There was a long pause. We knew what Dr. Norlin was thinking. Then . . .

"Very well. Do you know where I live?"

"Yes. Oh, thank you Dr. Norlin! You don't know how important it is!"

"I'll be waiting. It's no disturbance."

"I'll be right over. Thank you again . . ."

"Yes, yes. Goodbye."

"Bye."

We left the house of one Mr. Ward, Assistant Professor of Eng-

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lish Literature and sometime victim of polymorphous sexuality, now deceased in a certain sense. Before we left, however, we were very careful to undo one more button of our shirtdress and to check our lipstick. We were going to the house of Dr. Norlin. The bastard had laughed at our love. Now we were beautiful, and he would love us, but we would only laugh at him . . .

Through Time And Space With Ferdinand Feghoot: LXIII

The singular gravitational field of Hennypenny's Planet made it perfect for the raising of poultry. The Northern Hemisphere, where gravity was only at Moon level, was ideal for breasts, thighs, and drumsticks; the Southern, where it was three times Earth's, produced unequalled egg crops. Consequently the entire population was prosperous, and millions of retired librarians, sea-captains, and mathematics professors made fortunes almost without lifting a finger.

But there was one fly in their ointment. Their hilly world had only short-distance radio, and their technology was inadequate to the problem. Naturally, they called in Ferdinand Feghoot—and in a very few days he had long-range transmissions going full blast.

"Mr. Feghoot," cried the Elders, as they measured him for his statue, "*how* did you do it? And at such a low cost?"

"It wasn't too hard," their benefactor replied modestly. "What you lacked was something to reflect radio waves back to the surface, so I simply took one of your wonderful Southern Hemisphere hens and placed her in orbit."

"But— but we don't understand. How could one of our very own hens—?"

"Look at it this way," said Ferdinand Feghoot. "I provided your planet with a heavy side layer."

—GRENDEL BRIARTON (*with thanks to Simon Kahn*)

See Feghoot advertisement in "Marketplace," page 128.

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The existence of a flourishing Japanese Science Fiction has (except for a few moving pictures as bad as anything turned out by Hollywood) been largely unnoticed in the United States. British SF has always been with us, examples of the French genre *(ably translated by Damon Knight) have appeared in our pages recently, and Hugo Correa's THE LAST ELEMENT (April, 1962) has revealed the South American field to us.* Bokko-chan *is the first Japanese SF story to appear here—and, so far as we know, to appear in any English language magazine. The author is a thirty-six year old retired Tokyo pharmacological manufacturer who now devotes all his time to writing Science Fiction, and his stories have been collected in three volumes—*Jinzo Bijin (*"A Man-Made Beauty"*), Youkoso Chikyu-san (*"Hello, Mr. Earth"*), *and* Akuma No Iru Tengoku (*"The Heaven Where Satan Lives"*). *His hobbies are playing golf, and collecting* nestsuke *(miniature Japanese carvings) and American cartoon and comic books. Noriyoshi Saito, the translator, works for the Civil Aviation Bureau of the Ministry of Transportation, conducts a proprietarial school for students of English, and translates to and from both languages. And now we will introduce reader-san to a most unusual B-girl, "a man-made beauty", whose name is*

Bokko-chan

by Shin'ichi Hoshi

(translated by Noriyoshi Saito)

THE ROBOT WAS REALLY A work of art. It was a female robot and, being artificial, she was designed to be the perfect beauty. Every element that went to make up a charming girl was taken into

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consideration. The trouble was that she looked a little prissy, but who can deny that a prissy air is an indispensable prerequisite for a beauty?

Nobody else had ever ventured to build such a robot. Indeed it was silly to build a robot just to do the work of a man when for an equal amount of expense one could design more efficient machinery or hire suitable workers from among the many whose applications jammed the "Situation Wanted" columns of the classified ads.

However, this robot was made at leisure by the master of a certain bar. A bar-master, in general, will not drink at home at all. For him liquor exists only as his stock-in-trade which should never be consumed for private use. And those haunting drunkards who frequented his bar so willingly helped him to make money with which he was able to spend his off hours in pursuit of a hobby.

It happened that his hobby was the building of a charming robot-ess.

Since this was his only hobby he spared neither effort nor money in designing her. For instance, she was covered with a skin so smooth that it could hardly be distinguished from that of a real girl. It is no exaggeration to say that she was more enchanting than the genuine beauties around.

Unfortunately, like many great beauties, she was rather empty-headed, since the designing of a complex brain was beyond the capabilities of her inventor. She was able to answer questions of the simplest form and perform simple motions, such as taking a drink.

The bar-master named her "Bokko-chan" and placed her on a chair behind the counter of his bar so that she would not be too close to the customers. He was afraid the robot might show her cloven hoof upon close examination by the patrons of the bar.

So a new girl appeared at the bar and all of the visitors greeted her pleasantly. She behaved satisfactorily until she was asked something other than her name and age. And yet, fortunately enough, nobody noticed she was a robot.

"What's your name, Baby?"

"Bokko-chan."

"How old are you?"

"I'm still young."

"Well, how young are you?"

"I'm still young."

"I say, *how* young are you?"

"I'm still young."

Fortunately the patrons of the bar were polite enough not to pursue the question of her age any further.

"Nice dress you wear, huh?"

"Nice dress I wear, don't I?"

"What do you like best?"

"What do I like best?"

"Will you drink a glass of . . . say, gin fizz?"

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"I will drink a glass of . . . say, gin fizz."

Bokko-chan never objected to a drink. Nor did she ever become intoxicated.

Charming, young, prissy and smart to chat with. The story of the new girl at the bar spread throughout the neighborhood and the number of visitors to the bar increased. And every visitor enjoyed himself by chatting and drinking with the charming Bokko-chan. Indeed, she seemed to please everyone.

"Whom do you like best among us all?"

"Whom do I like best among you all?"

"Do you like me?"

"I do like you."

"Well, then, let's go and see some movies."

"Well, then, shall we go and see some movies?"

"When shall we go?"

Whenever Bokko-chan was asked a question she could not answer she would signal the bar-master who would immediately rush to her side.

"Hey, mister, it's not polite to be flirting with such a baby so much."

The insistent visitor could but grin and retire gracefully under the stern admonition of the bar-master.

The bar-master would sometimes crouch at the foot of Bokko-chan in which a small plastic spout had been installed. From this spout he would drain the cocktails that she had drunk and, being a frugal man, he would serve them again to the customers. However, the patrons of the bar were not aware of this and they never ceased to praise the female robot. They praised her youth and beauty, her steady character, the fact that she never flattered too much, and that she never lost her senses from drinking. Thus the popularity and fame of Bokko-chan grew and grew as did the number of customers at the bar.

Among the many admirers of Bokko-chan was a young man whose infatuation with her became so great that he visited the bar every evening. Night after night he tried to talk her into going out with him without any success at all. Her lack of response nearly drove him crazy and he spent much more than he could afford in an effort to impress her. His frequent visits to the bar caused him to run up a considerable bill and when the bar-master called him to account he attempted to steal from his father in order to pay his debts.

His father caught him at his attempted theft and a bitter scene followed during which the father agreed to advance the young man enough money to pay his debts provided he would promise never to visit the bar again.

That evening the youth re-

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turned to the bar to pay his bill and, knowing that this was his last visit, he drank much and treated Bokko-chan.

"I shan't come any more."

"You won't come any more."

"Are you sad?"

"I am sad."

"In reality, you are not, are you?"

"In reality, I am not."

"No other girl is as cold-hearted as you."

"No other girl is as cold-hearted as I."

"Shall I kill you?"

"Will you kill me?"

The youth pulled a pack of drugs from his pocket, poured them into his glass then pushed the glass toward Bokko-chan.

"Will you drink this?"

"I will drink this."

Bokko-chan lifted the glass and drained its contents.

"Go to Hell, will you?" the boy said.

"I will go to Hell."

The boy quickly settled his bill with the bar-master and ran out into the night.

It was almost closing time and the bar-master was pleased with having collected such a large debt. He drained the liquor from Bokko-chan and set up drinks for all on the bar.

"Drink up, men," said the bar-master, "this is my treat."

The patrons of the bar drank a toast to the bar-master which he acknowledged by draining his own glass.

On that night the lights of the bar were not put out and the radio continued to play music. Nobody departed and yet nobody spoke.

And the time came when the radio said "Good night" as the station signed off the air.

"Good night," said Bokko-chan waiting with all her prissy air for the next man to call her.

COMING NEXT MONTH

GLORY ROAD

a new novel by

ROBERT A. HEINLEIN

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This is one of the damndest stories we have ever read.

TIS THE SEASON TO BE JELLY

by Richard Matheson

PA'S NOSE FELL OFF AT BREAKfast. It fell right into Ma's coffee and displaced it. Prunella's wheeze blew out the gut lamp.

"Land o' goshen, dad," Ma said, in the gloom, "If ya know'd it was ready t'plop whyn't ya tap it off y'self?"

"Didn't know," said Pa.

"That's what ya said the last time, Paw," said Luke, choking on his bark bread. Uncle Rock snapped his fingers beside the lamp. Prunella's wheezing shot the flicker out.

"Shet off ya laughin', gal," scolded Ma. Prunella toppling off her rock in a flurry of stumps, spilling liverwort mush.

"Tarnation take it!" said Uncle Eyes.

"Well, combust the wick, combust the wick!" demanded Grampa who was reading when the light went out. Prunella wheezed, thrashing on the dirt.

Uncle Rock got sparks again and lit the lamp.

"Where was I now?" said Grampa.

"Git back up here," Ma said. Prunella scrabbled back onto her rock, eye streaming tears of laughter. "Giddy chile," said Ma. She slung another scoop of mush on Prunella's board. "Go to," she said. She picked Pa's nose out of her corn coffee and pitched it at him.

"Ma, I'm fixin' t'ask 'er t'*day*," said Luke.

"Be ya, son?" said Ma, "Thet's nice."

"Ain't no pu'pose to it!" Grampa said, "The dang force o' life is spent!"

"Now, pa," said Pa, "Don't fuss the young 'un's mind-to."

"Says right hyeh!" said Grampa, tapping at the journal with his wrist, "We done let in the wave-len'ths of anti-life, that's what we done!"

"*Manure*," said Uncle Eyes, "Ain't we livin'?"

"I'm talkin' 'bout the coming gene-rations, ya dang fool!" Grampa said. He turned to Luke. "Ain't no pu'pose to it, boy!" he said, "You cain't have no young 'uns nohow!"

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"Thet's what they tole Pa 'n' me too," soothed Ma, "An' we got two lovely chillun. Don't ya pay no mind t'Grampa, son."

"We's comin' apart!" said Grampa, "Our cells is unlockin'! Man says right hyeh! We's like jelly, breakin'-down jelly!"

"Not me," said Uncle Rock.

"When you fixin' t'ask 'er, son?" asked Ma.

"We done bollixed the priteck-tive canopee!" said Grampa.

"Can o' what?" said Uncle Eyes.

"This mawnin'," said Luke.

"We done pregnayted the clouds!" said Grampa.

"She'll be mighty glad," said Ma. She rapped Prunella on the skull with a mallet. "Eat with ya mouth, chile," she said.

"We'll get us hitched up come May," said Luke.

"We done low pressured the weather sistem!" Grampa said.

"We'll get ya corner ready," said Ma.

Uncle Rock, cheeks flaking, chewed mush.

"We done screwed up the dang master plan!" said Grampa.

"Aw, shet yer ravin' craw!" said Uncle Eyes.

"Shet yer own!" said Grampa.

"Let's have a little ear-blessin' harminy round hyeh," said Pa, scratching his nose. He spat once and downed a flying spider. Prunella won the race.

"Dang leg," said Luke, hobbling back to the table. He punched the thigh bone back into play. Prunella ate wheezingly.

"Leg aloosenin' agin, son?" asked Ma.

"She'll hold, I reckon," said Luke.

"Says right hyeh!" said Grampa, "We'uns clompin' round under a killin' umbrella. A umbrella o' death!"

"Bull," said Uncle Eyes. He lifted his middle arm and winked at Ma with the blue one. "Go long," said Ma, gumming off a chuckle. The east wall fell in.

"Thar she goes," observed Pa.

Prunella tumbled off her rock and rolled out, wheezing, through the opening. "High-speerited gal," said Ma, brushing cheek flakes off the table.

"What about my corner now?" asked Luke.

"Says right hyeh!" said Grampa, "Lectric charges is afummadiddled! Tomic structure's unseamin!!"

"We'll prop 'er up again," said Ma, "Don't ya fret none, Luke."

"Have us a wing-ding," said Uncle Eyes, "Jute beer 'n' all."

"Ain't no pu'pose to it!" said Grampa, "We done smithereened the whole kiboodle!"

"Now Pa," said Ma, "Ain't no pu'pose in apreachin' doom nuther. Ain't they been apreachin' it since I was a tyke? Ain't no reason in the wuld why Luke hyeh shouldn't hitch hisself up with

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Annie Lou. Ain't he got him two strong arms and four strong legs? Ain't no sense in settin' out the dance o' life."

"We'uns ain't got naught t'fear but fear its own self," observed Pa.

Uncle Rock nodded and raked a sulphur match across his jaw to light his punk.

"Ya gotta have faith," said Ma, "Ain't no sense in Godless gloomin' like them signtist fellers."

"Stick 'em in the army, I say," said Uncle Eyes, "Poke a Z-bomb down their britches an' send 'em jiggin' at the enemy!"

"Spray 'em with fire acids," said Pa.

"Stick 'em in a jug o' germ juice," said Uncle Eyes, "Whiff a fog o' vacuum viriss up their snoots. Give 'em hell Columbia."

"That'll teach 'em," Pa observed.

"We wawked t'gether through the yallar rain.
Our luv was stronger than the blisterin' pain
The sky was boggy and yer skin was new
My hearts was beatin'—Annie, I luv you.

Luke raced across the mounds, phantom like in the purple light of his gutbucket. His voice swirled in the soup as he sang the poem he'd made up in the well one day. He turned left at Fallout Ridge, followed Missile Gouge to Shockwave Slope, posted to Radiation Cut and galloped all the way to Mushroom Valley. He wished there were horses. He had to stop three times to re-insert his leg.

Annie Lou's folks were hunkering down to dinner when Luke arrived. Uncle Slow was still eating breakfast.

"Howdy, Mister Mooncalf," said Luke to Annie Lou's pa.

"Howdy, Hoss," said Mr. Mooncalf.

"Pass," said Uncle Slow.

"Draw up sod," said Mr. Mooncalf, "Plenty chow fer all."

"Jest et," said Luke, "Whar's Annie Lou?"

"Out the well fetchin' whater," Mr. Mooncalf said, ladling bitter vetch with his flat hand.

"The," said Uncle Slow.

"Reckon I'll help 'er lug the bucket then," said Luke.

"How's ya folks?" asked Mrs. Mooncalf, salting pulse seeds.

"Jest fine," said Luke, "Top o' the heap."

"Mush," said Uncle Slow.

"Glad t'hear it, Hoss," said Mr. Mooncalf.

"Give 'em our crawlin' beat," said Mrs. Mooncalf.

"Sure will," said Luke.

"Dammit," said Uncle Slow.

Luke surfaced through the air hole and cantered toward the well, kicking aside three littles and one big that squished irritably.

"How is yo folks?" asked the middle little.

"None o' yo dang business," said Luke.

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Annie Lou was drawing up the water bucket and holding on to the side of the well. She had an armful of loose bosk blossoms.

Luke said, "Howdy."

"Howdy, Hoss," she wheezed, flashing her tooth in a smile of love.

"What happened t'yer other ear?" asked Luke.

"Aw, Hoss," she gigled. Her April hair fell down the well. "Aw, Pshaw," said Annie Lou.

"Tell ya," said Luke, "Somep'n on my cerabeelum. Got that wud from Grampa," he said, proudly, "Means I got me a mindfull."

"That right?" said Annie Lou, pitching bosk blossoms in his face to hide her rising color.

"Yep," said Luke, grinning shyly. He punched at his thighbone. "Dang leg," he said.

"Givin' ya trouble agin, Hoss?" asked Annie Lou.

"Don't matter none," said Luke. He picked a swimming spider from the bucket and plucked at its legs. "Sh'luvs me," he said, blushing, "Sh'luvs me not. Ow!" The spider flipped away, teeth clicking angrily.

Luke gazed at Annie Lou, looking from eye to eye.

"Well," he said, "Will ya?"

"Oh, Hoss!" She embraced him at the shoulders and waist. "I thought you'd never ask!"

"Ya *will?*"

"*Sho!*"

"Creeps!" cried Luke, "I'm the happiest Hoss wot ever lived!"

At which he kissed her hard on the lip and went off racing across the flats, curly mane streaming behind, yelling and whooping.

"Ya-hoo! I'm so happy! I'm so happy, happy, happy!"

His leg fell off. He left it behind, dancing.

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Introduction to John Jay Wells'

and Marion Zimmer Bradley's ANOTHER RIB

We do not know if either of the co-authors of this story were familiar with the Cabbalistic teaching that Adam Cadmon, *or Primal Man, was androgynous; or with the far from notional statement of the great medieval Biblical Commentator, Rashi, that the word translated as "rib" in Genesis 1, xxi actually means "side," and that the operation in fact—by removing the feminine "side" of Adam Androgyne—transformed our bisexual Ancestor into our monosexual ancestors. Familiar or not, they have taken an admittedly daring theme and dealt with it in good sense and good taste. Marion Zimmer Bradley, whose first major sale was CENTAURUS CHANGELING (F&SF, April, 1954), hails from "a somewhat Lovecraftian farm in upstate New York," now lives in Texas with her husband and twelve year old son. She has published many stories and books in many different fields under many different names, but says that Science Fiction is her first love and the only fiction that she consistently writes under her own name. Mrs. Bradley also describes herself as "a nut on circus acrobatics, carnivals, Italian opera, and folksinging." If any of these interests are shared by John Jay Wells, we cannot say. In fact, we can say very little about him. His real name is known only to his collaborator, who describes him as in amateur journalism, and having some reputation, additionally, as a promising artist. And now suppose you read their story? It is a strange one, and it occurs under the strange stars of a strange world . . .*

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ANOTHER RIB

by John Jay Wells and Marion Zimmer Bradley

"REMEMBER, YOU REQUESTED it," Fanu murmured. The little alien's pronunciation was as toneless, as flat as ever, and yet, somehow, it carried sympathy and distress. "I am sorry, John."

John Everett slumped before the film viewer. At last, reluctantly, he leaned forward and underlined his shock with a second view. "When—when did you take this?" he asked.

"A—I do not know your words for it—a revolution ago. Do you wish for a current view, my friend?"

"No. God, no! This is bad enough. You're—sure of your identification?"

Fanu's three-fingered hand riffled expertly for a sheet of co-ordinates. Shaking, forcing his eyes and mind to activity, Everett checked the data, glancing back now and then at the viewer to verify. There was no doubt. That was Sol—that had been the Sun—that vast incandescent swirl covering . . . oh God, covering a range well beyond Pluto!

He became aware that he had been sitting quite still for many long minutes, stiff muscles and sluggish circulation forcing themselves, at last, even through the numbness of his brain. Fanu was waiting.

Fanu was always waiting. The alien had waited aeons. Not Fanu himself, of course, but his kind. Waiting; always waiting for other life forms, other intelligences, new civilizations—new enthusiasms. They had waited too long. There weren't many left.

"Looks like we've joined you," Everett muttered, bitterly, at last.

"I do not quite understand—?"

"You said—" he paused, groping for a kind word, "that your people were becoming extinct. Looks like mine are—already."

"Survivors—"

He got to his feet so quickly he knocked over the chair, and spent fumbling minutes setting it right. "But there are no survivors. We were the first probe. Out to the stars. All the way to Proxima Centauri. For what? An Earth-type planet. Fine, we found one—but for what? For whom? Oh, God, for whom!"

"John," softly, a three-fingered hand falling on his shoulder, "You are not alone, not as I am. You

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have your friends, your—your crew."

Everett walked over to the window, and stared out at the valley, dotted with the tiny huts of the expedition. "For now, yes. Sixteen men—a good crew. But we're mortal, Fanu. Human life is pitifully short, compared with yours. We're mortal—and we're all male. By your standards, we're—here today and gone tomorrow."

"Are you quite sure that need be, John?"

Everett turned to look into the alien's large green eyes, cursing the inevitable semantic differences, the inability to get a point across in a hurry. Suddenly the shock, the numbness broke into stark horror. He couldn't stand here painstakingly explaining the differences in the word *men* and the word *male* to a friendly alien, when he'd just found out . . . found out . . . his voice strangled. "Just take my word for it, Fanu," he said thickly, "in fifty years, homo sapiens will be a lot more extinct than your people. Now I've got to go and—and tell them—"

He stumbled blindly away and fumbled for the door, conscious of the big green eyes still fixed compassionately on his back.

He had managed to calm himself and speak quietly, but the men were as shocked as he had been, first numb in silent horror, then moving close together as if to draw comfort from their group, their solidity.

"There's—no mistake, Cap'n?" Chord asked timidly. He always spoke timidly; incongruous for such a giant.

"I've seen the plates myself, and the co-ordinates, Chord. And I have no reason to doubt Fanu's—the alien's—data. From what I've been able to gather, it must have happened about six months after we left. His equipment's superior to ours, but pretty soon we'll be able to see it for ourselves."

Somewhere in the back row of the group of men, there was a muffled sob. He could see the anguish on the other faces, men struggling with the idea of a future that was no future at all. Young Latimer from the drive room—the one they all called Tip—had bent over and buried his face in his hands. It was Tsen, the young navigator, who finally managed the question on all their minds.

"Then it's—just us, sir?"

"Just us." Everett waited a moment, then turned away, dismissing them with his back. It wasn't a thing you could make speeches about. One way or another, they'd have to come to terms with it, every man for himself.

He heard the rustle of Fanu's garments, and turned to smile a

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greeting. The two stood side by side on the hilltop, looking down at the men working in the little valley. "What is it to be?" Fanu finally inquired.

"It's—" Everett could not suppress an amused smile, "a hospital for you—and Garrett, the pharmacist's mate."

"Oh?" Fanus features could not duplicate a smile, but his eyes blinked rapidly with pleasure. "That is most kind. Most kind."

"Hardly. It just takes care of one problem. The two of you can keep us in good health, I'm sure."

"Your race is so strong!" Fanu's toneless voice gave, nevertheless, an impression of amazement and awe. "My own people, under such a sentence as yours, gave themselves over to despair."

"You think we didn't?" Everett's jaw tightened, remembering the first few weeks; the dazed men, Garrett stopped in the very act of slashing his wrists. Then he straightened his back. "We've found that hard work is a remedy for despair, or at least—a good defense against it."

"I see," remarked the alien. "Or at least—I understand that it might be so. But how long can you work? Will you fill the valley with your superbly constructed buildings? For sixteen of your race?"

Everett shook his head, bitterly. "We'll all be dead before we can fill the valley. But at least we'll make ourselves comfortable, before we—go."

"There is no need to die."

He swung around to face the alien. "You've been hinting that and hinting that for the last two months! If there's one thing worse than despair it's false hope! Even if your people were immortal, and they're not—"

"I did not mean to anger you, John." The strange little paw uplifted in apology.

"Then quit hinting and say something."

"Mammals—" Fanu began, then halted, obviously groping for the proper terminology.

"Yes, we're mammals, technically," Everett snorted, "the mammaliam characteristic perished with our solar system, though."

"That is not true—or it need not be true."

Everett stared at the alien, wishing for the thousandth time that he could read that dark expression. Fanu went on "I have observed your race in undress, compared the information from your study reels—from your ship—the material you brought to me so graciously—I cannot thank you—"

"Yes, yes!" he broke in. Fanu was so damned polite. He liked the alien, but the only one of the Earthmen who really got along with him perfectly was Tsen, who was used to all this overdone courtesy.

"Forgive me, what I mean is,

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your . . . two sexual groups are so close together. . . ."

Everett's eyes widened. Then he laughed, embarrassed. "You just lost me. I mean, I don't understand your statement, Fanu."

"Your two sexual types are so exceptionally similar—"

"Oh, lord, vive la difference!" Everett laughed aloud, and some of the men in the valley glanced up, curious, pleased to see their captain laughing with the omnipotent, knowing alien. "If you mean our—females had two arms, two legs, and a head, yes, we were very similar, but—"

Fanu regarded John with compassion. "No, not that. I mean that, compared to our race, your own sexual differences seem minute. It would be a relatively simple matter to convert one to the other. I recall in the tapes several instances in which this sort of change occurred naturally, and others in which the changes were brought about medically."

Everett knew his eyes were bulging, and he felt the anger rising in his throat. He beat it down. Fanu wouldn't know. He could read about the taboos of another race without fully appreciating . . . in spite of his revulsion, Everett gave a spluttering laugh. "Yes, yes, I see your point, Fanu. It's an interesting theory, but even if it would work, it, well, it wouldn't work that way."

"Why?"

"Well, it's a matter of—my men wouldn't stand for it. We're not guinea pigs," he finished, testily.

"No." The voice was compassionate again. "You are a race doomed to extinction, with a possible way out. My race had no such second chance."

Fanu glided away toward the laboratory and Everett stared after him; one thought drumming through his mind. "My God! He wasn't theorizing! He—he *meant* it!"

The slight noise finally made him look up. He hadn't heard anyone come in, and started involuntarily at seeing Chord's great hulk before him.

"Sorry to disturb you, Cap'n."

"That isn't necessary, Chord. What can I do for you?"

The big man smiled sheepishly. "Hard to break habits, sir. Guess I never will." Despite his size and demeanor, Chord was not stupid, though hampered by poor education and embarrassment for his giant clumsy body. Now he shifted uneasily from foot to foot as he mumbled. "I—guess I've been picked out as a representative, sir. For—for the men."

"Gripe committee? Look, I'm not really your superior any more, Chord. We're all together now."

"Yes, sir, but—you're still Captain."

Everett sighed, waited for the

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big man to continue. "Some—some of us would like to build private quarters, sir. I mean—not fights, or anything like that, we just—we'd like some privacy—you know—homes, sir, like—"

"Like back on Earth?" Chord nodded dumbly and Everett said, "Well, I see no objection to that. You didn't need to consult me."

"It's just—well, sir, some of the guys thought you might get the wrong idea, sir."

"Wrong idea?" Everett asked stupidly, startled by Chord's red face.

"Well, you know, a couple of men living alone. It's nothing like that, sir. Honest."

He waited until Chord left before he permitted the embarrassed amusement to boil over into his face; and knew that the amusement covered some strange unease that was almost fear.

"He actually worried about it," he laughed, telling Fanu later.

"Shouldn't he?" Fanu inquired gently. "John, don't stare. I'm not sure of the word in your tongue, but I think your people sense that the—the last person to approve of such a matter would be yourself."

Everett got to his feet, angrily. "Are you implying that my men would actually—"

"You said they were free agents. You said they were not your men."

Everett turned away, rubbing a tired hand across his eyes. "Yes, so I did. Habit."

"Habit in morals too, John?"

"Fanu! Look, I appreciate that you don't know our taboos, probably they're idiotic, but—they're *ours*. As for the men—"

"Do *you* know them, John?"

"Of course."

"How long did you expect to be here?"

He opened his mouth, then paused to consider, mentally counting. "Six months on planet, eight months coming, eight months back."

"How long have you been here now?"

"Eighteen—months." His face worked, remembering some of the material on those cursed tape reels. "Fanu, you're my friend, but what you're suggesting is ridiculous. You haven't known Earthmen long enough to make an adequate appraisal."

Fanu shook his head solemnly. "There is a folk saying on your tapes—we have a similar one—that one may be too close to the forest to see the trees." He gestured John to the window and pointed. "Count them, John. Seven small huts, and three are smaller than the others. Why?"

Trying to swallow the horror in his throat, the suspicion that both frightened and sickened him, he shook his head in denial. "They're friends. You wouldn't understand."

"No?" The voice sounded very sad. "Don't you think we had

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friends among our own? But you are blessed with bodies that will permit friends to become mates."

"Stop it!" Everett felt like screaming the words; he held a picture of a large whitewashed wall disintegrating before his eyes, of himself trying to hold it together with his bare hands, of his men standing by, staring at him. Fanu was gesturing again. Unwillingly, his eyes followed the pointing paw. The men had organized an impromptu ball game of some sort, rough house, much laughing, shouting, pushing and tussling. Two of them stumbled and fell together. They were slow in getting up and they moved apart with both reluctance and a touch of conscious guilt.

He jerked away from the window, trying to blot out the sight. The wall had large holes in it, the ravages of inevitability. His mind worked feverishly with brush and plaster; children, horseplaying, a reversion to adolescence—

"Put the question to your men!" For the first time, Fanu's tones were tense with the beginnings of anger. "You have a second chance, John! They have the right to choose for themselves if they want to die! You can't decide for them all! Put it to your men, or—" he swung around, to see that the little alien was actually trembling, "or I shall do so on my own initiative."

Everett felt a sour taste in his mouth. "All right," he shouted, "I'll put it to them—but don't blame me if they tear you to pieces afterward!"

The looks on their faces had been enough. The men knew Fanu, certainly. He was one of them now. They knew the tragic history of his people, respected his knowledge, even loved him. But he was an outsider, and he'd proved it. He didn't understand mankind.

The knock on the doorframe went through him like a shock.

It was Chord, and another man. Everett blinked in the half light, trying to pick him out. Young Latimer—the apprentice, the one they called Tip—just a kid—my God! Under his nose, right under his nose!

"Cap'n—" Chord began, then trailed off. The big man looked sick, stricken, and Everett became aware that his own expression must be one of outright condemnation. He—the mighty tolerant, benevolent skipper. We're all together now, eh? *In a pig's eye!* Did he think he was God? Everett suddenly hated his own guts, and struggled to bring his face to order. With a new humility, he said "Come in, Chord. You too, Lat—Tip. What can I do for you?"

"About—about what you said, a couple of days ago. You know, about . . . the . . . about what Dr. Fanu said. Did he mean it?"

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"Really mean it?" Tip added. Everett shifted his glance. Young, yes; but there was nothing simpering about him. Clear-eyes, unashamed, he met the Captain's eyes; a good-looking kid, the athletic, All-Academy type, but not *too* good-looking. Calloused hands. A faint residue of old acne scars along his jawline.

"Well," Everett said slowly, trying to keep his voice impersonal, "he says he means it."

"Dr. Fanu doesn't strike me as a joker," the boy continued. The alien had become "Doctor" to them after repairing several broken ribs and a fractured knee or ankle in the last few months.

"No, I don't think he was joking."

"How does he—I mean—"

"I didn't get the details," Everett cut in quickly, "But if he says he can—his race is advanced enough, biologically—he may be able to do what he says. Let us reproduce."

"Have babies," Tip amended. The bluntness shocked Everett. He'd never put it quite that way even to himself. "Will you—let us talk to him, Captain?"

Chord broke in, shamble-speeched as always. "Tip and me, we talked this over a long while. Funny part, we always—well—thought about something like this, then Dr. Fanu came along and said—thing is—well, will you take us to talk with him?"

He got up slowly, nodding. "If that's what you want." They nodded silently and he started toward the door, then turned, still torn by doubt and incredulity.

"Would you answer—one rather blunt question? Have you two—is this something that developed between you here on Prox, or were you—were you like this before touchdown?"

Both men suddenly looked dismayed, disgusted, their faith in an intelligent commander suddenly cracking across the top. Chord's lips curled in rage, but it was the boy who blurted out "For God's sake, sir, what do you think we are?"

"Sorry," he said quickly, "I—sorry. It's good of you to volunteer." He turned and led them toward the hilltop laboratory, but in his thoughts the unspoken answer drummed, over and over. "God in Heaven, I don't know! I honestly don't know! And what's worse, I don't know what you're going to be, and neither will God!"

It's really an elementary process from a surgical point of view," Fanu began academically.

Everett squirmed, his eyes straying toward the closed door of the hospital room, as Fanu went on "Chemically, of course, we're on less sure ground. The hormones must be reproduced synthetically, pituitary stimulation, a great deal of chanciness. It's fortunate that your sexes produce enough of the

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hormones of each so that I could test them for synthesis. But there's no reason it shouldn't work."

He glared at the alien, taking out his emotion in fury at the scientific coldness of that voice. "In other words, they're just laboratory animals! Guinea pigs!"

"Not at all. It will work. It may take time for adjustment of the glandular system, and much will depend on physical adjustment. Now if I had been able to get him younger, before puberty—"

"Why Tip?" he demanded, interrupting, wanting to shift the attention from disgusting medical matters, hang on to his sanity, "I'd think Chord was so much bigger, he'd be better able to—"

"To carry a fetus? Not at all. Unfortunately it's a matter of pelvic development. Chord is much too masculine, his pelvis much too narrow to accommodate—"

Everett exploded in hysterical laughter. "Too masculine! That's a jolt, isn't it! Too masculine!"

"I can give you a sedative," the alien said tonelessly, "You sound as if you needed one." But the hand on his shoulder was faintly comforting. Everett pulled himself together a little, and Fanu said "John, it must be. If your race is to survive—"

"Maybe we shouldn't survive!" he snarled. "Wouldn't it be more decent to die, die clean and human and what we were intended to be, than as some—some obscene imitation of—*it's not natural!*"

"Neither is the presence of your race on this planet."

"That's different," he countered weakly. "That's mechanics. This —"

"You bred domestic animals into alternate phenotypes for your own use. You bred humans to some extent, with your limitations on marriage, compulsory sterilization for defective types—"

"I opposed that!" Everett defended. "That was different—"

"And so is your situation—different from anything that ever happened to your race," the alien said. The Earthman stared bleakly, his prejudices and his intelligence warring. "I asked you to put it to your men, John. You did. You considered it only fair that they should make their own decision. They did. Now you oppose it."

"I brought them here, didn't I?"

"Yes, and I thank you for that. Some day you shall thank yourself."

"I doubt that. Oh, I know by your reasoning, I'm an anachronism, but I still can't—" he trailed off, glancing back at the hospital door. "Why both of them, if you can only—convert one?"

Fanu blinked in surprise. "For their physical pleasure, John. I understand that is quite important to your species, whether or not as a means of reproduction. Certain anatomical rearrangements—

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"Spare me!" He saw the alien did not understand the phrase and made some elaboration.

"Oh," the alien murmured an apology. "I thought you would wish to know."

"I—" Everett swallowed. "I'd rather know about the scientific part of it. I still don't understand. I mean, there are males and there are females, and that's that."

"Not at all, not in your species. There are members, like your crew, with predominantly male organs and vestigial female organs, and—presumably, I've only seen films—predominantly female organs and only rudimentary male organs." He paused. "Shall I go on?"

The Captain found that he wanted a stiff drink, but nodded for Fanu to continue.

"There are vestigal organs, as I say, and certain common elements. The DNA factor can be cross-stimulated by hormones, certain chemicals—it was done long ago, to a limited extent, by your own scientists." Everett watched the alien doctor pick up a phial and hold the contents to the light. "It's most fortunate that your race comes equipped with pairs of everything, including the reproductive organs."

"It gives you a guinea pig expendable."

If Fanu had been capable of human expression, he would probably have looked hurt; Everett, increasingly sensitive to the alien gestures and intonations, knew he was wounded. He blinked solemnly. "It makes it possible for him, guinea pig if you prefer, to be both sexes. What must be done is to transfer one set of lobes, and the nature of these makes it possible to separate, and increase the chances of success. We can subject the interstitial tissue to massive doses of hormones, and DNA mutating materials." Everett evidently looked skeptical, for Fanu hurried to the laboratory animal cages and extracted a furry little native mammal, about the size of a squirrel. "It works, John. It works. This is proof. Not changed at infancy or at puberty, but as a full-grown male!"

Everett stroked the animal absently, glumly. "Yes, but it's not human. And—will they be?"

Fanu didn't answer. Everett hadn't expected him to answer.

A few of the comments were lewd, as he'd expected, but most of the men were kind. He had gone down to the recreation hall, gotten a glass of their home-brewed ale and listened, fading into the background. No more than three or four of the men had made cracks, and they were the ones who'd make cracks about anything, simply for lack of anything better to do. Good workers, but dense in the empathy department.

"May I sit down, sir?"

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It was Tsen. Everett gestured and watched the little navigator seat himself. Tsen made an expression of distaste toward the gossipers. "You do not approve, either, of what Chord and the youngster have done?"

"It's not a question of approval, Tsen. It's a question of survival. They feel, and Fanu feels, it's the only way." He gave a short, bitter laugh. "They're right, of course."

"But you do not approve."

He took a long pull at his glass and muttered "I was taught it was a sin. *The* sin."

"It? Homosexuality?" Everett winced, saw Tsen's expression and tried to depersonalize himself. "But, Captain, wasn't the very base of that sinfulness, the fact that they could not reproduce?"

He stared. He knew his jaw was dropping, but he stared, anyway.

"Do you think Doctor Fanu would accept me as a second—volunteer?"

"You!" He looked around quickly and lowered his voice. "Tsen, I never suspected that—"

"That I am human, sir? We've been here nearly two years, and we are not monks, not ascetics. If anyone here has been reared in such a tradition of asceticism, it is myself. Yet affection, physical need—they overwhelm some people. We are not all blessed with your control, sir. Some seek satisfaction from themselves. For some, it requires an attraction to others, and if the others happen to be of the same sex, that is unfortunate, but—under these circumstances—unavoidable, sir."

Everett flinched. That was getting it straight between the eyes. "Who, if I might ask?"

"Would it make you feel better, sir, or only more bitter?" Everett, trapped in his own prejudice, could not look into the dark eyes. "Will Doctor Fanu accept me for consideration? Are things—well with Chord and Tip?"

"Fanu seems satisfied, and if he isn't, no one will be." Everett tilted up his glass, drained the dregs and set it down hard. "Yes, I'm sure Fanu will consider you. You think alike, modern. You should get along very well."

He hadn't thought about the situation for weeks. Tsen was out of the hospital, and there were other things to consider. Supplies from the ship were running out. Everett applied all his skill and energy to working out substitute methods, converting some machinery, utilizing native products. The men continued to surprise him with jury riggings and inspired minor inventions. The planet offered a mild climate and two growing seasons a year. Still, as their equipment disintegrated, they were forced to resort to native beasts of burden, and to do more manual labor.

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How long had Chord been doing the work of two men on the community farm? He confronted the giant late one afternoon as they straggled back to the mess hall.

"I can handle it, Cap'n. I grew up on a farm."

"That's not the point, Chord. Where's Tip?"

"At home." There was no apology and no anger, mere honest confusion.

"Chord, it's not fair for you to do his work. I don't care if you're the strongest man here. He's imposing on you."

"No sir. No, he's not. He's sick. Doctor Fanu—"

But Everett was already striding purposefully toward the small hut shared by Chord and young Latimer. The big man loped behind him, protesting, but the Captain could think of nothing but the rotten laziness of the younger man, who would let his lover do his work, and idle here—

The hut was darkened, and for a moment he could not make out the shapes of things, Chord's words a muttered undercurrent in the background. He stepped over the high threshold, and looked around, finally making out the form on the bed in the corner.

"Latimer!"

The boy raised himself part way, pulling a blanket close around him. A blanket? Lord, it must be eighty-five or ninety in here! "What the hell is this—letting Chord do your assigned work?"

"Sir, I didn't—I can't get up!" The voice was pathetic, and Everett had to force himself to remember that the kid was malingering. "Has Garrett seen you yet?"

"N—no, sir. I—I—"

Everett pulled at the blanket, but the boy pulled it around himself with savage strength, shouting "Leave me alone!" then suddenly burst into tears and fell back on the bed. Chord grabbed Everett's arm. "Damn it, leave him alone!" Fury trembled the big man's voice. "Leave him alone—sir."

Tip's sobs from beneath the blanket were high, muffled, hysterical. Everett pulled his bruised arm loose from Chord's great fingers, looking down at the form beneath the blanket; a form strangely, unbelievably distorted—

"Oh, my God," he said, and left the hut almost running, heading for Fanu's hillside laboratory.

"But of course it worked, John. Didn't you believe me?"

Everett paced the floor, running his hands through his hair again and again. "My God, no, no, I—I didn't. I thought it was some sort of cruel, monstrous joke, a—a ghastly nightmare I couldn't wake up from."

"Do you want to?"

"Want to? Oh, Lord, Fanu, haven't you been listening? This is monstrous, it's—unholy!"

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"The word is without meaning to me, John. It is without meaning to the men who wished this done."

He stopped pacing and sat down. "If you can do this, why can't you—test tubes—anything but this!"

"It might be possible."

"It might—then why in God's name this—blasphemy?"

"John, the word does not exist for me. I could create a fertilized ovum in that matter, but gestation would be tremendously difficult outside its natural element. It would require every moment of two or three men's time for the entire gestation period. And even if we had so many men at our diposal—"

"But—"

"Hear me out, John. Tip was a poor choice for the—first. I would not have consented. I warned them of the dangers, but Tip insisted. Chord had many reservations, but the younger man won out. He will have difficulty. But even so, incubating a fetus in his body is much safer and surer than any amount of laboratory work."

"Safer for the fetus."

"That's true."

He lunged to his feet, confronting the alien, furious. "You're gambling with that boy's life!"

"Yes, and he knows it. He said—he said that he wanted Chord's inheritance combined with his."

Everett turned away, hands to his face. "Oh, God, what am I trapped in? Why didn't the ship crash coming in?"

"Ask your God, John."

He jerked around, stunned.

"If you accept your deity's omnipotence, mustn't you accept the fact that he has permitted this development?"

"If that boy dies—Fanu, if you'd *seen* him—"

The alien blinked, solemnly. "Hysteria is perhaps natural," he confirmed. "Even though he has been prepared for this there is some amount of emotional shock remaining. You must remember, there is a certain chemical imbalance. Tsen will have an easier time."

John sat down again. The nightmare was rising above his ears, drowning him in its terrifying black waters. He didn't hear the alien go out.

The jokes had ceased. They concerned too many men now. The men who were concerned and still able did not look too kindly on lewd comments about their partners. Emotional patterns were developing, friendships becoming deeper, the new way of life more and more ingrained. Everett sometimes thought that he sounded like a reactionary preacher, mumbling to himself. They were all against him now. They knew how he felt, and they had stopped discussing it in his hearing. They made their reports when they must, and that

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was all, a habit not yet broken.

He kept his log. Some day he would either run out of paper or learn to make a substitute. That was something to consider. The one grain they'd been able to grow —he'd have to consult the record tapes; how did you make rice paper? Maybe among his study materials, Tsen had something that would tell him—the hell with Tsen! Why bother? He'd be dead, they'd all be dead before they ran out of paper. Then what use would the log be to any of them?

The rainy season between the two growing seasons was well under way when someone beat on his door, one night. He mumbled admission, not turning.

"Sir!"

"What? Chord, what is it?" The giant looked wild, his hair tousled, his eyes wide. "What is it, man?"

"It's Tip, sir. He's awful sick!"

"Hasn't he been, all along?"

"This is—no, sir, this is different. He . . . he hurts. He's in awful pain."

Everett gasped and had to suppress a hysterical laugh. "Oh. Well, isn't that just what you've been waiting for? He ought to have thought of that before he took Fanu's offer." He wondered insanely if he ought to offer congratulations.

The big man dug his thumbs into Everett's shoulders with painful force, his face livid with anger and fear. "Look, sir, I've had about enough of your—" he stopped and gulped and said, quite meekly for him, "Look, sir, I'm scared. It—it's not *time* yet. Not for about six weeks. And I'm—I'm scared, sir," he finished pitifully.

The two men hurried to Chord's hut through the blowing rain, and Everett suppressed another burst of crazy hysteria. Those corny old videocasts on a vanished world! Rainstorms, the black of night, a hurried summons—he found himself dismissing irrelevant, ribald thoughts of a midnight delivery of a . . . child . . . by two men.

But when he stepped into the hut the thoughts fled, beaten away by the pain of the youth on the bed. He was incredibly pale, sweating badly, trying desperately to muffle his outcries and not succeeding very well. His lips were white and blood-specked where he'd chewed on them. Everett found himself concerned, involved; whatever the cause, he could not ignore the agony in the young face. Tip gave the Captain one look, turned his face away and shut his eyes. "Couldn't you get—Garrett," he said weakly, and gasped.

"When did this start?" Everett asked, running over his memory quickly for things that would help, and for the first time wishing he'd listened more closely to Fanu's explanations.

"While ago." Tip made a smothered sound.

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"*How* long ago?" he snapped, trying to be sympathetic in spite of his worry.

"Couple . . . couple hours." The boy suddenly threw his head back, muffling a groan, trembling violently. Everett glanced at his chronometer. The spasm lasted nearly two minutes. He kept his eyes averted from the swollen body, its distortion no longer concealable by the blanket. Tip, breathing hoarsely, murmured "How did our women ever—" then his eyes widened in surprise and he slumped back on the bed, unconscious.

"Tip! Tip! Wake up, kid—please," Chord pleaded, bending over the boy, shaking him gently, stroking the sweat-bathed forehead.

"That's no help." Everett felt frantic. Fanu would have to straighten this out. He *had* to. He couldn't let the boy die, not after a —sacrifice—like this!

"Can you carry him?" He helped Chord wrap the blanket around the unconscious figure, that still twisted silently, spasmodically beneath their hands. Chord picked him up, and they hurried through the rain, up toward the beacon lights of the alien laboratory.

"And he'd been conscious until then?" Fanu questioned gently, moving around the moaning figure.

"Yes, all the time," Chord answered. "It isn't time, is it? It isn't time? That's what he was scared of. He was afraid to say anything. He said it'd go away . . . all those books and tapes he read . . . he . . . by God, if he dies, I'll kill you!"

"I am not your God," Fanu said quietly, sadly. "Life and death are not in my hands, but I will do all that."

"Fanu—" Everett began, dragging his eyes away from the obscenely swollen body. He hadn't seen any of the . . . experiments . . . in clear light until now, and the sight stunned him, brought all this brutally home. Maybe he had been a fool. Why had he, alone, been kept in the dark? He realized only now; there had been a conspiracy of sorts, to keep Tip, and Tsen, and young Reading, the ComCon man, out of his way.

"You've got to do something. Chord says it isn't time."

"Seven and a half or better of your gestation counts. Better than I hoped."

"Fanu . . . the human male was never designed for . . . this . . ." he found himself wanting to giggle, more with fright than amusement. Tip was regaining consciousness, moaning slightly, grunting like an animal. Garrett was there, white-coated, his hand reassuring over Tip's, calm and matter of fact as he explored the boy's body briefly with a stethoscope. "Heartbeat fine so far, Dr.

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Fanu. But we can't monkey around too long."

"Chord, carry him in there. I must operate this time, I am afraid." As Tip's eyes focused on him, the alien's voice—and it no longer sounded toneless to Everett—said kindly "I'm sorry, Tip. You are too masculinely constructed. Remember, I warned you."

The boy nodded wordlessly, biting his lip. Then, as Chord picked him up, he gasped between his teeth "If it comes to a choice—remember what you promised me, Doc—"

Everett sank down in a chair and buried his face in his hands, and consciousness was swamped in black nightmare. The next thing he knew, Chord stumbled out of the operating room door, and Everett, feeling nightmarishly idiotic, watched him give a startling performance of expectant fatherhood.

"Female," Fanu announced, his tiny mouth curving in the nearest approach to a smile he could manage. Chord caught at the alien's clothing.

"Tip? *Tip?*"

"He's all right. Very weak, but fine. You can go in and see him. Be very gentle, though."

Chord's face went limp all over. "Oh, thank God," he muttered, "thank God! Cap'n, that idiot kid made the Doc promise—to save the kid if it came a choice—"

He pushed past them into the other room.

"Female?"

"Female," Fanu confirmed. "I arranged things that way—with all of them."

"But—"

"Did you think this was permanent?"

"Well—well, yes, I did."

Fanu made a sound of alien amusement. "That's what's been troubling you. No, John. In fifteen years your planet will have four or five nubile females, at least. The climate will aid precocity. In two generations you will be on firm footing. Your race is intelligent, hardy, ingenious, young—all the things mine wasn't. Tip's case was the most difficult. He'll have to wait two years before attempting this again."

"Again?" Everett gaped.

"His own request. I had difficulty making him agree even to that, or I should have taken measures to end it now. I shall, next time. When the females are grown, his chore will be done."

"When the females are grown—what happens to the—to the converted men then? The—attachments, the—the lovers, Fanu?"

Fanu blinked sadly. "I don't know, John. I shall not be here. I am old, John—old. But I'm sure you'll solve it."

Everett turned and walked over to the window, staring down at the twinkling lights from the huts, the

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rebirth of homo sapiens. Somewhere behind him he could hear an infant wailing. The rain had stopped, and stars were coming out, the strange stars of a strange world.

"All right," he said softly, "I was wrong. Now, for Your sake, tell us what's next?"

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Once, across the sands tides lapped,
And oysters slumbered fathoms
deep.
Even were corals crimson-capped
In mild Syrtis. The thirties writers
Will tell you—and of buccaneers.
How keen they were then on sword-
fighters
And their deaths and fears!
But those were good years.

Then we had princesses—
Always brave and sweet those
maidens—
Wore long swords too and longer
dresses
And came to no harm (it being
fiction).
The forties writers, sharper of pen,
Drained the oceans, changed the
diction,
Built domes all round Argyre and
then
Made us little green men.

Fifties were the worst:
Dust, lack of oxygen,
All the stuff of realism at first,
Foxholes, sweat inside your suit
and frost
Outside. Then came the plagiarists
Erecting their pre-fab plots. We
lost
All legends then, for verbose mists
And wooden protagonists.

Now? Again old ruins bleed
Dust into darkling desert sands,
Unvisited. And we who read
Of Mars legend still hold, cleansed
in the mind,
A place both actual and unreal,
By many writers' hands designed:
Silence's stamping ground, remote,
ideal,
Safe beyond Time's clay heel.

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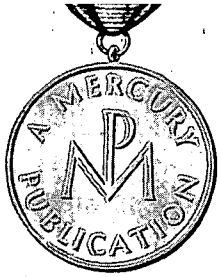

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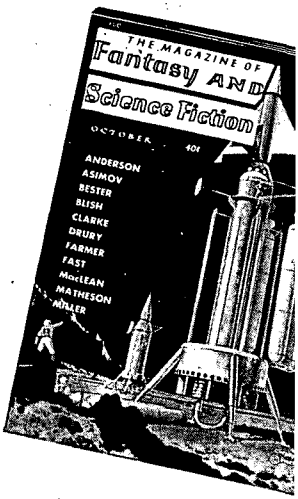

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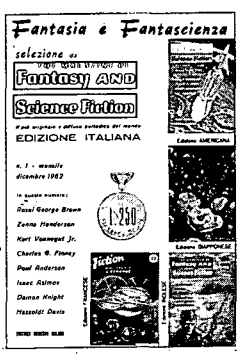

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